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SPECIAL STUDY MISSION TO LATIN AMERICA ON TECHNICAL COOPERATION

REPORT

BY

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SUBCOMMITTEE ON INTER-AMERICAN AFFAIRS

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FOREWORD

HOUSE OF REPRESENTATIVES,
COMMITTEE ON FOREIGN AFFAIRS,
Washington, D. C., June 23, 1954.

This report has been submitted to the Committee on Foreign Affairs by a special mission which undertook a study in September and October 1953 of technical cooperation in Latin America.

The findings in this report are those of the special study mission and do not necessarily reflect the views of the membership of the Committee on Foreign Affairs.

ROBERT B. CHIPERFIELD, *Chairman.*

HOUSE OF REPRESENTATIVES,
COMMITTEE ON FOREIGN AFFAIRS,
Washington, D. C., June 23, 1954.

Hon. ROBERT B. CHIPERFIELD,
Chairman, Committee on Foreign Affairs,
House of Representatives, Washington, D. C.

DEAR MR. CHAIRMAN: I am submitting for consideration by the Committee on Foreign Affairs the report of the special study mission on the technical cooperation program in Latin America.

It is hoped that the observations and recommendations of the study mission will be useful to the committee and to the Congress as background information.

DONALD L. JACKSON,
Chairman, Subcommittee on Inter-American Affairs and Special Study Mission to Latin America on Technical Cooperation.

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INTRODUCTION

Long before the birth of Christ, when the earliest civilizations of Africa and Asia were emerging from the mists of prehistory, their counterparts on the continents of America were astir. From Tierra del Fuego, on the southernmost tip of what is now South America, to the jungles of Yucatan, a hundred tribes of American aborigines were hunting and gathering in the tropical jungles, the savannahs and pampas, the marginal regions between mountains and sea and mountains and jungles. In the rarefied air of the Andean highlands, on the bleak altiplano of what is now Bolivia, along the coast of modern Peru, Ecuador, and Chile, and in the mountain regions of Guatemala, these tribes, in many instances acting in complete independence of each other, were building temples, fortresses, and public works of such magnitude as to confound modern minds. The ruins of Cuzco, in Peru; Chichen Itza and Teotihuacan, in Mexico; and others in Guatemala and along the coasts of both South and Central America stand today as mute but vivid testimony to the skill and the imagination of their builders.

But it is not of the past that we must think at present. While we admire the genius of the Inca, the Aztec, and the Mayan scientist, astronomer, and builder, we must preoccupy our thoughts today with the welfare of those who people the vast region once held in dominion by the tribal leaders. Today, a rapidly growing population which already exceeds that of the United States, lives, works and builds in the area between the northern Mexican border and the southern tip of South America. In that area lie the 20 Republics, which, together with the United States, constitute the membership of the Organization of American States. Here, encompassed within an area approximately 2½ times the size of our own country, are to be found peoples who, while sharing a common heritage and a common language,[1] are as unlike each other politically, economically, and sociologically as would be visitors from several planets of the solar system. It is impossible to cut a single measure of cloth to fit all of the Americas, and to attempt to do so is to create a multiplicity of complex problems, frustrations, and misunderstandings. Each of the Republics, whatever its history, stands sovereign today, in its own right, as a member of the family of free nations. In one instance, that of Guatemala, the shadow of Communist influence is clear, and the situation is viewed with concern by all of that country's adjacent neighbors. Nonetheless, the United States continues in its efforts to help the people of that nation through the medium of technical assistance.

Many years ago several private American groups, notably the Rockefeller Foundation, embarked upon a farsighted and determined program to wipe out endemic diseases, improve the methods and the

[1] Excepting Brazil, the official language of which is Portuguese, and Haiti, the official language of which is French.

techniques of agriculture, and generally to lift the standards of life and living for the millions of United States neighbors to the south who were diseased and illiterate and who tilled the soil of their homelands with the same tools and in the same manner as had their ancestors in the dawn of history. The results were heartening and had far-reaching effects. With the cooperation of the governments of the Americas, new methods were instituted, diversification of agriculture commenced, and initial research and studies into disease and nutrition were instituted.

In spite of the efforts of the private groups and individuals, it became apparent at an early date that the financial and human resources necessary to do more than initiate the fight would have to be drawn from highly organized and well-financed sources. The attack must be made simultaneously across a broad front by men and women thoroughly familiar with the problems and equipped with the tools and the finances necessary to a coordinated assault upon disease, malnutrition, and illiteracy. Factors of climate, geography, topography, and political constitutions complicated greatly the efforts of the foundations; although to those groups who were in the vanguard of the fight must be assigned a good share of the success that may have attended subsequent actions.

Political considerations, supranationalistic ambition, sensitive pride, and a reluctance on the part of some to admit to a need for technical advice and cooperation have all been complicating factors in the United States effort to be helpful. It is one thing for a neighbor to call upon another for assistance in putting out a fire in the house, but it is quite another thing to ask for help in getting the kitchen stove alight.

United States technical cooperation is guided by the fundamental rule that we have nothing to sell in this field. More than 120 individual projects are presently under way in 19 of the Republics. These programs, in agriculture, health and sanitation, education, public administration, and a dozen related fields, have all been instituted following requests by the governments concerned and after a survey of practicability and financing by United States representatives.

While the initial cost of a given project, once approved, may require a relatively high contribution by the United States Government, the clear intent of the Congress in passing the enabling legislation for the technical cooperation program was that the ratio of costs to the United States should be steadily reduced in subsequent years, while the contribution of the participating government should be increased. The same general rule was to apply to personnel in the field. In general, and with a few exceptions, it can be stated that in programing and administering projects those ends have been sought.

United States aid is administered through the Foreign Operations Administration (FOA), under the direction of Hon. Harold E. Stassen, former Governor of Minnesota. The facilities of other Government departments and agencies are called upon for the procurement of needed technicians and experts. Thus, the Department of Agriculture would normally furnish technicians for agrarian programs, while the United States Public Health Service would make available to FOA the doctors and nurses required in programs for improved health or public sanitation. Individual specialists in public administration, railway management, statistical reporting, etc., may be employed

under direct contract by the government concerned, but are not accountable to the FOA country director.

United States technicians in a given country are under the direction of and responsible to a United States national, designated as the country director. His responsibility includes supervision, direction, reporting, budget control, inspection, and coordination with the responsible officials of the Republic in which a program is in operation. The assigned technicians work in the field with nationals of the country to which they are assigned, advising and supervising work on the projects. Administrative direction of individual programs in most cases is exercised through an instrument designated as a *servicio*. In contracts which are concluded for the institution of a technical cooperation program within a given Republic provision is made for the establishment, within the appropriate ministry or ministries, of the *servicio*. The creation of such an agency within the ministry directly concerned with the project insures that the country director will be in a position to maintain a continuing liaison with the appropriate government officials upon whom rests the responsibility for obtaining in their own countries adequate local appropriations, designating a sufficient number of trained personnel, and providing whatever other cooperative measures are necessary to insure the ultimate success of a project.

It has been found in practice that the *servicio* form lends itself to a high degree of cooperative endeavor between the nationals of a country receiving the benefits of technical cooperation, and the United States nationals assigned to that country for implementation of the project agreed to by contract.

The United States has expended approximately $126,000,000 in direct expenditures for the technical cooperation program in Latin America. A more detailed breakdown of the purposes for which the funds were expended will be found hereafter in this report. It should be stressed again that the United States contribution to the program has not only been relatively small in terms of total and global American aid, but that it represents a minority contribution to the programs and projects which have been instituted throughout the several Republics.

Acting under the authority contained in a directive from Hon. Robert B. Chiperfield, chairman of the House Committee on Foreign Affairs, a study mission departed from the United States on September 15 for a visit to all of the countries in Latin America, with the exception of Paraguay, Venezuela, and Guatemala, where technical cooperation programs are in existence. Heading the study mission was Hon. Donald L. Jackson, of California, chairman of the Subcommittee on Inter-American Affairs of the House Committee on Foreign Affairs. Mr. Jackson was accompanied during the initial portion of the trip by Robert F. Woodward, Deputy Assistant Secretary, Office of Inter-American Affairs of the Department of State. Col. Edward W. DuRant, Jr., United States Marine Corps, and Juan J. Manzanares, special staff consultant, completed the personnel of the mission. The chairman of the subcommittee desires at this time to express his thanks to Robert F. Woodward, Charles R. Burrows, Director, Office of Middle American Affairs, Bureau of Inter-American Affairs, Department of State, who replaced Mr. Woodward at Lima, Peru, Colonel DuRant, and Mr. Manzanares for the able and conscientious manner in which they carried out the respective duties assigned to them. The initial portion of the trip through the Caribbean, the

Guianas, and to Belem, Brazil, was accomplished by special mission aircraft of the United States Navy, and the study mission is desirous of expressing its appreciation to the crew of the aircraft, all of whom performed their duties in a conscientious manner reflecting credit upon the Naval Establishment. The crew of the C–47 was as follows: Pilot, Lt. Richard F. Smith, USN173857; copilot, Lt. Comdr. Roger S. Pillsbury, USNR145457; mechanic, Carl D. White, USN AD1656–91–54; radioman, E. W. Bilicke, USN AL1827–54–75.

From Belem, Brazil, the study mission continued its trip by commercial aircraft, and it should be noted that Pan American Airways and its affiliates within the several Republics took unusual steps to insure that schedules would be met and that operational delays would be avoided wherever possible.

While the primary area of study for the mission was the field of technical cooperation, every opportunity to inquire into the progress of the United States Information Service and related activities was taken. In addition, Mr. Jackson spoke before a number of groups, governmental and private, as will be detailed in the individual country studies. On several instances it was possible for the study mission to fly to remote locations along the general route of the trip to see at first hand operations which had been largely or in part financed by the Export-Import Bank or the International Bank for Reconstruction and Development. These trips will be further discussed in the body of the report. In other instances the study mission had an opportunity to visit and to observe industrial and business activities of a private nature, some local and others which came into being as a result of foreign investment. Numerous opportunities presented themselves for frank and illuminating discussions with the nationals of the several Republics, both in and out of government. Whenever possible an effort was made to obtain the views and the suggestions, not only of the members of the government party in power, but of the leaders of other political groups and movements, whose interests and activities were obviously centered in the welfare of their own countries and were not related in any manner to the propaganda or the aggression of the Communist conspiracy. Data of a statistical nature, graphs, and other material contained in this report have been drawn from a number of official and private sources.

The thanks of the mission are due the former Assistant Secretary of State for Inter-American Affairs, Hon. John M. Cabot, and to the several country desks under his jurisdiction. Complete cooperation was afforded the study mission by all of the United States chiefs of mission and their staffs throughout the duration of the trip, and extraordinary measures were taken in many instances to insure that the mission would have immediate access to sources of pertinent information. Appointments with local government officials were expeditiously arranged through the good offices of the several United States ambassadors, and incidental travel arrangements and housing accommodations taken care of in a most efficient manner by those charged with the responsibility.

REPORT ON TECHNICAL COOPERATION IN LATIN AMERICA

I. CUBA

The special study mission to Latin America on technical cooperation departed Miami, Fla., at 8 a. m. on September 15, 1953. It arrived at Camp Columbia Military Airport in Habana, Cuba, at 9:15 a. m. on the same date. The mission was met at the airport by Mr. Harold M. Randall, Chargé d'Affaires of the American Embassy, and by other American and Cuban officials. The group proceeded immediately to Santiago de las Vegas, where for several hours, and in company with United States and Cuban technicians, a tour was made through the kenaf fiber project. The economy of Cuba is founded upon sugar, and one of the major expenses attending the shipment of the annual crop is that represented by the importation of many thousands of tons of jute to be used in the construction of the necessary sacking.

A. KENAF

The kenaf development program started as a cooperative fiber project between the United States Department of Agriculture and the Cuban Ministry of Agriculture in 1943.

In 1951 kenaf was made a technical cooperation project with added emphasis on the program but under the continued technical direction of the United States Department of Agriculture. During the period of the program's existence kenaf varieties have been developed adaptable to Cuban conditions, varieties which have a high percent of good quality fiber and are also comparatively resistant to disease. Decorticating (fiber-stripping) methods and machinery have been developed and under test have demonstrated the feasibility of mechanizing the extraction of kenaf fiber.

The development of kenaf varieties and machinery reached a point of perfection of such importance as to interest private capital and, through the added inducement of a seed program in 1951 and a fiber program in 1952, the industry entered its first phase of existence.

The extraction of fiber requires considerable investment and the program of the United States Government, which guaranteed a minimum of 12, 18, 24, and 32 cents per pound for various qualities of kenaf fiber, was a great factor in inducing private individuals to invest over $1 million in the Cuban kenaf industry. This investment was for production equipment, for planting and harvesting, for buildings and decorticating machinery. The investment was made after a greatly delayed announcement of the previously referred to fiber program. This delay was reflected in late plantings, delays in the letting of contracts for machinery and equipment, and corresponding delays in the installation of the newly developed machinery, a handicap

which the industry failed to overcome. A few fiber-producing plants met their schedule but the majority produced only a portion of their quota. Although the results were disappointing, all the producers were sufficiently successful at the close of the season to look optimistically to the future.

Studies of methods to reduce production costs and the redesigning and rebuilding of machinery continue. Meanwhile the cooperative kenaf program has continued to be an order of first importance in the Ministry of Agriculture and full credit is given to American cooperation. The Cuban Government recognizes the value of a local source of bagging fiber as Cuba's needs alone approximate 110 million pounds, which would require 110,000 acres to grow the fiber and the labor of 10,000 workers for a period of 3 months annually.

In planning for the future, producers are not unmindful of the potential United States demand for imports of jute and jute products which exceed 650 million pounds annually. A compulsory reduction in sugar production should make available about 10 times the acreage needed to produce Cuba's kenaf needs. In case diversion becomes a reality the retired land must be planted to crops or returned to pasture lands. If the land is to be planted, kenaf offers the least complications from a labor standpoint as the seasonal planting and harvesting periods do not conflict with those of sugarcane. One of Cuba's outstanding social problems is the employment of its people, and the possibilities of kenaf cultivation making a contribution toward meeting this problem are significant.

The visit of the study mission to the kenaf experimental fields fortunately coincided with the annual field day conducted by the Department of Agriculture of Cuba. A large delegation of Cuban farmers was on hand to view the various experimental plots and the decorticating machinery which is presently being perfected. The occasion was further highlighted by the presence of the Cuban Minister of Agriculture, Dr. Alfredo Jacomino.

Cooperative Kenaf project, Cuba

	United States funds	Cuban funds	Other funds	United States personnel	Cuban personnel
Calender year—					
1943	$7,284	$6,922	$50	1	
1944	19,368	9,675	3,800	1	
1945	27,047	18,190	3,150	2	
1946	42,769	55,594	5,300	3	7
1947	33,170	53,450	11,924	3	11
1948	29,178	43,400	5,000	2	13
1949	3,178	63,200	1,000	2	14
1950	32,583	49,650	50,000	3	20
1951	39,994	32,400		3	23
1952	79,343	103,700	800	6	31
1953	173,100	100,000	2,240	6	31
1954	133,900			7	
Proposed, fiscal year 1955	190,500				

B. CENTRAL HERSHEY

During its stay in Cuba the subcommittee was invited and accepted the invitation to visit the Central Hershey of Cuba, located some miles from Habana. Central Hershey is an excellent example of American foreign capital at work abroad and it is thought that the value of

this report might be somewhat enhanced by a short description of the operation.

Central Hershey was founded by Milton S. Hershey, for the original purpose of providing sugar for his chocolate factory at Hershey, Pa. Mr. Hershey was already over 60 years old when he came to Cuba and selected the lands and site for his new project. The mill and batey (settlement or town) are among the best constructed in Cuba. Mr. Hershey added to his Cuban properties by the purchase of neighboring small mills, two of which (Rosario, at Aguacate, and San Antonio, at Madruga, on the Central Highway) are in operation. These two properties, whose history dates back into the colonial era, are tributary to Hershey; their sugar is made so as to polarize over 99°, is warehoused in bulk, and brought to Hershey in gondola cars for refining.

In addition to the electric railway and the factories, the combined properties of the 3 mills include some 60,000 acres of land, 125 miles of private railroad lines, about 20 steam locomotives for hauling cane, and about 1,000 cane and other types of cars.

For many years Mr. Hershey took a very active interest in Cuba, and visited his Cuban properties frequently until after he had passed the age of 75. He died in October 1945, at the age of 88. Many years previous to his death, he transferred most of his fortune, including both his chocolate and his sugar interests, to a charitable trust for the Hershey Industrial School.

Before Mr. Hershey's death, negotiations had been started for the acquisition of the Hershey sugar and railroad enterprises in Cuba by the Cuban Atlantic Sugar Co., a holding company owning the Cía. Azucarera Atlántica del Golfo, the largest raw sugar producer in Cuba. This acquisition was completed in 1946.

A trip to Central Hershey is easiest made by the Hershey Cuban Railway, a public electrified railroad whose main line runs from Casablanca (opposite Habana) to Matanzas. Central Hershey itself is about halfway, or 25 miles from Casablanca.

While the principal service of the railroad is transport of freight to and from Central Hershey, it has a considerable amount of general traffic, particularly in the summer months. Its line is only a few kilometers inland from coastal resorts between Casablanca and Jibacoa, such as Tarara and Guanabo.

The first half of the ride from Casablanca to the Central traverses a relatively poor and little cultivated district. After passing the little station at Peñas Altas the country improves, and more and more cane is seen, particularly to the south, while on the hillsides to the north are henequen plantings. The last 10 or 12 kilometers are along the north side of the so-called Rio Blanco Valley, a beautiful cane zone, bordered by hills. This valley has been producing cane since far beyond living memory. It is black land, requiring relatively light rainfall. As the train climbs up the northern rim of the valley, the Central becomes plainly visible directly ahead and located on the plateau to the east.

The plant consists principally of the raw sugar mill, sugar refinery, electric plant, machine and car shops, sugar warehouses, peanut oil plant, and henequen plant. The oldest of these installations, the raw sugar mill, dates from about 1919. It was doubled in size in 1926, and now grinds about 7,000 short tons of cane per day of grinding season; its largest crop was in 1952 (being the equivalent to about

114,000 tons of 96° raw sugar). In fact, however, no raw sugar at all is actually bagged in the plant, as it moves directly, by continuous process, into the refinery, from which it emerges as the white refined sugar of commerce. The refinery output is somewhat over 1,000 tons of sugar per day, produced not only from the cane ground by the raw sugar plant but from raw sugars brought from San Antonio, Rosario, and other raw sugar mills. The refinery is the "bone-char" type (so called from the filtering medium used), the process being the same as that in the refineries at New York, Boston, and other northern centers. (No other plant in Cuba combines cane grinding, raw sugar manufacture, and bone-char refining in a continuous process.) It is the largest Cuban refinery, having about double the capacity of the next in size. Its biggest output in any one year has been somewhat over 5,100,000 hundred-pound bags (255,000 short tons). The refined sugar warehouse has a capacity of over 600,000 hundred-pound bags. The time between receipt of cane at the mill and the bagging of refined sugar therefrom is about 30 hours.

The cane-grinding season begins in mid-January and ends in late May. If markets permit, the refinery continues thereafter to operate, in the so-called dead season, on raw sugar brought from its affiliated nearby mills, Rosario and San Antonio, or from other mills. The combined raw-sugar output of Rosario and San Antonio is usually somewhat less than that of Hershey.

The Hershey electric plant provides power for the various plant needs, as well as for the railroad. It is interconnected with electric plants of the affiliated San Antonio and Rosario mills, as well as with the Cia. Cubana de Electricidad.

The Hershey peanut-oil plant produces crude and refined peanut oil, peanut meal, and some byproducts. It began operations in 1937, and its largest output (4,775,000 pounds of refined oil) was made in 1941. Production of peanut oil was started as a measure of diversification in a period when Cuba's sugar production was severely restricted. During the war it proved to be a valuable aid in supplying Cuba's edible oil requirements. The peanuts are purchased from farmers in various parts of the island, many being produced in Oriente Province. The plant operates seasonally.

The growing and decorticating of henequen is another diversification enterprise at Hershey. The factory began operating in 1941, and for several years has been producing more than 4 million pounds of fiber per year. The plant normally operates most of the year. The henequen grows best on rocky limestone soil, particularly hillsides. Leaves can first be cut when the plant is about 4 years old, and cutting continues annually for some 10 or 12 years, or until the plant flowers and dies. The fiber is exported and is used chiefly for making tough twines for binder and baling purposes.

Production of refined sugar direct from cane is divided roughly into three major steps: extraction and clarification of the juice; concentration until the sugar content crystallizes; remelting, filtering, and recrystallization as the refined sugar of commerce.

The cane is harvested during the dry, cool period from January to May, when sugar content is highest and harvesting is practicable. The cane is cut by hand and brought to the mill in railroad cars, trucks, and oxcarts, which dump it into hoppers. Conveyors pass it through revolving knives, and then feed it into the tandems, 2 in

number at Hershey, each consisting of 2 sets of crushers, followed by 5 sets of mills (each comprised of three 7-foot rollers). The tandems grind the cane and squeeze out the commercially extractable juice. The remaining fiber, called bagasse, is carried to the furnaces as fuel to provide the steam and power to run the tandems and all the other machinery and installations of the sugar factory and refinery, and the peanut plant, henequen plant, and electric railway.

In the raw sugar factory, the extracted juice is limed to neutralize acidity. It is heated and then clarified, through settling, in clarifiers. Then it is pumped into a series of evaporators, each operating under a progressively greater vacuum in order to reduce the boiling point, as the objective is to concentrate the liquid without letting the sugar caramelize. In the vacuum pans further boiling is effected at still lower temperature, and sugar crystals, or grains, are formed. When the crystals are of the desired size, the mass passes, directly or indirectly, to the centrifugals, which throw off the adhering molasses by revolving at high speed. This molasses is re-treated until it can no longer produce crystals, the residuum being known as blackstrap, or final molasses, used for distillation of alcohol or for cattle feed. The sugar remaining in the inner baskets of the centrifugals is the raw sugar of commerce (96° or 97° polarization). In raw sugar mills this is usually bagged for storage or shipment, but in the continuous process used at Central Hershey, it is conveyed at once to the refinery, without bagging, and there washed, remelted, filtered, and then again filtered through huge cylinders of fine bone-char, from which the liquid emerges clear and colorless. It is then crystallized again in evaporators and vacuum pans, centrifuged, dried, screened for size, and finally bagged as white refined sugar (practically 100° polarization). This final Hershey product is of high quality and is identical with that of the best refineries in the world.

The study mission is most appreciative of the kindness shown them by Mr. Lawrence Crosby, head of Central Hershey. Mr. Crosby and members of his staff conducted the study mission through all of the operations carried on at Central Hershey, including the henequen and peanut oil plants. The housing accommodations, school, church, and hospital provided by the company for its Cuban employees are a model of cleanliness and efficiency. Working conditions are excellent and gainful employment is furnished by the operation to many thousands of Cuban workers.

C. HABANA

While in Habana the subcommittee called upon the President and Foreign Minister of the Republic and held a luncheon meeting with the membership of the American Chamber of Commerce, at which meeting Mr. Jackson spoke to the group. Political, economic, and military briefings were given the subcommittee by United States Embassy officials and officers of the several Armed Forces missions presently in Cuba.

From Habana the subcommittee proceeded to Santiago de Cuba where the group spent the night of September 18, departing the following noon for Port-au-Prince, Haiti.

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II. HAITI

A. BACKGROUND

The Republic of Haiti occupies the western one-third of what the Spanish conquistadores called Hispaniola. It is one of the two Negro Republics [1] in the world, and Negroes comprise 95 percent of the total population. The 3.3 million Haitians live on 2.2 billion acres of arable land, which acreage comprises only one-third of the total area of the Republic. The balance of the country is in large part mountainous and badly eroded. With a population of 1,000 persons per square mile over all, and 300 persons per square mile on the arable land, Haiti is confronted with a multiplicity of complex and frustrating economic problems.

Agriculture forms the basis of the economy of Haiti. Its pattern of production is characterized principally by a very large number of small individual holdings, dedicated primarily to production for family subsistence. There are a few sizable plantations producing sugarcane and sisal, and these are largely under foreign management and direction. Some extensive government and locally owned acreage constitute additional exceptions to the general pattern. Coffee, of which the United States is the largest buyer, is the principal export, constituting between 50 and 60 percent of the total value of exports. Sisal and sugar are the second and third most important exports by value (16 and 6 percent, respectively).

B. TECHNICAL COOPERATION

1. Purpose and scope

The technical cooperation program in Haiti has been designed to accomplish several important goals, towit: diversification of agriculture, improvement of public health, and the construction of reclamation projects designed to bring into production more agricultural acreage. In order to assist Haiti in raising the living standards and the health of its people, and to increase the country's productivity, the United States Government has been cooperating technically since the early 1940's, chiefly in the fields of agriculture and health. Technical cooperation in agriculture has included agricultural extension and demonstration, rubber development, reforestation, and planning for new irrigation projects.

2. Artibonite Valley project

An outstanding example of accomplishment in the field of agriculture is the pilot project of land reclamation in the Artibonite Valley, which served as a basis and practical model for the 75,000-acre Artibonite Valley reclamation project being financed by the Export-Import Bank. Arriving at the Haitian coast, the special mission aircraft of the study group followed the course of the Artibonite Valley for many miles, and the members had an excellent opportunity

[1] The other is Liberia.

to view the entire valley project. Technical assistance is also being furnished for the agricultural development phase of the main project, which has only recently been inaugurated.

3. Health and sanitation

In the field of health and sanitation a series of public health centers for the treatment of yaws and other diseases have been established. Assistance has also been given in the construction of sanitary water supply systems in a number of the Haitian towns and villages. It is expected that the United States will spend approximately $968,000 in Haiti this year, and the contributions by Haiti to the *servicios* established in the fields of agriculture and health and sanitation will approximate 1½ times that made by the United States.[2]

4. Meeting with officials, Port-au-Prince

Upon arrival in Port-au-Prince the study mission was welcomed by United States officials, headed by Ambassador Roy Tasco Davis. Officials of the Haitian Government Foreign Office were also present to meet the group. Official courtesy calls were made by the study mission on the same day to Foreign Relations Minister M. Pierre Liautaud; President of the Haitian Senate, M. Charles Fombrum; and the President of the Chamber of Deputies, M. Adelphin Telson.

5. Fonds Parisiens irrigation project

On Sunday, September 20, together with a group of United States and Haitian technical experts, the study mission motored east from Port-au-Prince to inspect the Fonds Parisiens irrigation project, where under the technical cooperation program a series of canals and irrigation ditches have been constructed to tap an underground river high in the mountains and to transport to land, which has for many years been an arid waste, the waters which will render possible the agricultural development of the area. The Fonds Parisiens project comprises some 10 miles of irrigation canals and ditches, 6 miles of which are primary channels for the transportation of the river water. Land which only a few years ago was almost completely depopulated, except for the presence of charcoal burners, whose activities served only to further strip the land of its protective coverings, is today green and productive A score of food products are being produced on the land, and those who have been fortunate enough to acquire property in the project are relatively well fed and housed. Many material evidences of the new era in Fonds Parisiens were evident to the study group. The mission was greeted on all sides by smiling faces and warm greetings. New homes were to be seen on all sides, replacing the miserable hovels in which the families had previously been forced to live.

6. Potable water systems

The mission also had an opportunity to visit several new municipal domestic water supply systems in Haitian villages, systems which for the first time in history are bringing out of deep wells water that is potable and free from injurious bacterial content. Domestic water supplies, previously dipped out of open ditches and catch basins, is now drawn from fountain taps located at central points throughout the villages, and the subcommittee made note of the fact that

[2] In all instances where proportionate contributions are indicated, the United States dollar value of local currency is intended.

the several installations were appropriately marked to indicate that the projects were the result of joint cooperative effort between the Republic of Haiti and the United States.

In the villages, as at Fonds Parisiens, the study group was impressed by the warm and friendly spirit evidenced by the Haitian villagers and townspeople.

7. Other programs

In addition to irrigation and reclamation projects, the technical cooperation agriculture program in Haiti includes experimental stations, home economic classes, instruction in the use and maintenance of mechanical implements in agriculture, advisory programs and information projects designed to impart a fuller understanding of the methods and the techniques employed. The technical cooperation program has introduced into Haiti projects designed to diversify the basic supply of food products. Also, an experimental plot of 400 acres of kenaf has been developed and has been turned over to the Haitain Government. Although the average farm plot in the Republic is less than 1 acre per farmer, a considerable start has been made toward increasing the production by the proper use of fertilizer and the introduction of crop rotation. Whenever possible, and consistent with the end purposes of the technical cooperation program, assistance has been given the Haitian Government in the construction of primary and access roads.

8. Importance of program

In a land where every farmer's primary concern is the production of food for his immediate family and the sale in local markets of excess food products, it is extremely difficult to assess the accomplishments of the technical cooperation program in terms of international balances of trade. However, it is reasonable to assume that some millions of dollars have already been saved to the national economy by the increase in food production growing out of the several projects. Dollars which are not required by the Government for the importation of essential foodstuffs can be diverted to other and vitally needed importations or expended on domestic requirements outside the area of subsistence. As the general standard of health in Haiti improves, it is obvious that additional land must be made available for agricultural purposes. It is imperative that work be made available on the land for the many thousands of Haitian citizens who are anxious and willing to work but for whom there is no employment at present. The problems of Haiti, human and physical, are perhaps as difficult as those to be found in any other of the Republics of America. Public health, agriculture, and education must proceed together in a well-planned and coordinated effort. The failure of any one of the three prongs of the attack may well result not only in failure to improve the overall economic picture, but in a state of complete unbalance which will defeat all of our efforts. The Haitian Government has given splendid cooperation to the technical cooperation program, and it is believed that a good start has been made.

Technical cooperation program for Haiti

	United States funds [1]	Haiti funds [2]	Other funds	United States personnel	Haiti personnel
Calendar year—					
1942				4	
1943	$508,000.00			8	66
1944				13	114
1945	250,000.00	$75,000.00		21	145
1946	(3)			24	144
1947	(3)			16	145
1948	[3] 325,000.00	597,159.61	$165.15	17	133
1949	170,000.00	664,000.00		18	236
1950	200,000.00	725,111.35		21	224
1951	272,000.00	664,185.05		19	215
1952	257,917.00	703,750.00	3,785.00	21	241
1953	190,666.67	572,000.00	1,000.00	22	236
1954	320,000.00	480,000.00	5,000.00	35	247
Proposed, fiscal year 1955	1,096,700.00				

[1] Cash contributions to servicios only. It does not include information on cost of United States personnel.
[2] Amount of cash contributions to servicios only. It does not include substantial amounts of contributions in kind.
[3] 3-year period.
Presently there is 1 United States technician working on a housing program, and 1 has worked since 1953 on customs program, but no cash contributions have been made in these fields.
[4] $25,000 has been contributed to the program on education and 5 United States technicians have commenced the groundwork on the program; however, the agreement has not been signed and as yet the Haitian Government has not contributed to the program.

Technical cooperation in agriculture[1] for Haiti

	United States funds [2]	Haiti funds [3]	Other funds	United States personnel	Haiti personnel
Calendar year—					
1942					
1943					
1944					40
1945	$125,000.00	$50,000		7	52
1946	(4)	(4)		8	56
1947	(4)	(4)		6	58
1948	[4] 125,000.00	[4] 300,000		7	46
1949	100,000.00	300,000		9	146
1950	100,000.00	300,000		10	141
1951	187,000.00	389,000		9	143
1952	116,667.00	350,000		10	172
1953	105,666.67	317,000		14	166
1954	177,450.00	266,000		20	167
Proposed, fiscal year 1955	531,600.00				

[1] This covers work in general agriculture and reclamation; special assistance to Artibonite Valley development project, and forestry and rubber program.
[2] Grant funds to servicios only. It does not include cost of United States personnel.
[3] Covers only cash contributions to servicio and does not include substantial amount of contribution in kind.
[4] 3-year period.

Technical cooperation in health and sanitation for Haiti

	United States funds [1]	Haiti funds [2]	Other funds	United States personnel	Haiti personnel
Calendar year—					
1942	(3)			4	114
1943	[3] $508,000			8	96
1944	(3)			13	74
1945	125,000	$25,000.00		14	93
1946	100,000	60,000.00		16	88
1947	75,000	105,000.00		10	87
1948	25,000	132,059.61	$465.15	10	87
1949	70,000	364,000.00		9	90
1950	100,000	425,111.35		11	83
1951	85,000	275,385.05		10	72
1952	141,250	353,750.00	3,785.00	11	69
1953	85,000	255,000.00	1,000.00	7	70
1954	142,650	214,000.00	5,000.00	8	80
Proposed, fiscal year 1955	288,500				

[1] Cash contributions to servicio only. It does not include cost of United States personnel.
[2] Amount of cash contributions to servicio. It does not include substantial contributions in kind.
[3] 3-year period

III. DOMINICAN REPUBLIC

The study mission departed Haiti on September 21, and arrived in Ciudad Trujillo, capital of the Dominican Republic, on the same day. Immediately upon arrival the group paid official courtesy calls upon the President of the Republic, Gen. Hector Bienvenido Trujillo Molina, and the Foreign Minister, Dr. Joaquin Balaguer. The mission also paid its respects to Generalissimo Rafael Leonidas Trujillo Molina, immediate past President of the Dominican Republic and brother of the present Chief Executive. Following the official calls, Mr. Jackson accepted an invitation from the Chamber of Deputies of the Dominican Republic to address the body, and his remarks on problems of mutual interest and the program of technical cooperation were well received by the legislators.

A. TECHNICAL COOPERATION

The program of United States technical cooperation, reinstituted in the Dominican Republic in 1951, has not been underway sufficiently long to have produced outstanding results.

1. Scope

The present program is active in education, agriculture, and health. The only *servicio* now established is in education. A vocational school for teaching industrial arts, constructed in Ciudad Trujillo and now in operation, promises to make a significant contribution toward satisfying the need for skilled workers. The contributions by the Dominican Republic to this *servicio* are 2 times that made by the United States.

Technical assistance in agriculture has been made available in the fields of tobacco culture, entomology, soil improvement, and cotton production. This assistance is aimed at helping to diversify the agricultural economy; to provide for the study of insect problems; to lend advice concerning the proper methods of control of insect pests, including the establishment of an adequately equipped laboratory; and to develop the use of fertilizers and erosion control methods.

Assistance has also been made available for determining the feasibility of establishing a fishing industry.

In the field of health and sanitation, two nurse consultants have been assigned to the Dominican Republic to assist in the development of a long-term nursing program, including the establishment of a national school for nurses, the provision for training grants to student nurses, and the preparation of courses for ward supervision and nurses aides already employed.

2. Cost

The total cost to the United States of the technical assistance program in the Dominican Republic for fiscal year 1954 is expected to be $265,000 and the Dominican contribution is estimated at $171,000.

3. Visits to projects

United States Ambassador William T. Pheiffer arranged a very comprehensive briefing session for the study mission at the Embassy chancellory. Following the briefing session the group, accompanied by United States and Dominican Republic technical cooperation officials, visited the vocational school above mentioned and had an opportunity to visit classrooms, laboratories, and shops, where instruction was being given by qualified technical experts in metalworking, auto mechanics, woodworking, and electronics. The staff of the vocational school includes 5 American technicians, 8 Dominican technicians, and 30 nationals of the Dominican Republic who possess superior attainments and have become qualified in the past 2 years to take over a measure of the teaching responsibility. The curriculum in all courses is of a very basic nature and, while the shops are adequately equipped, present facilities are somewhat limited by United States standards. A number of trainees of the vocational school have already entered private industry in the Dominican Republic.

B. GENERAL OBSERVATIONS

On the evening of September 21 the study mission was honored at an official reception tendered by President Trujillo. On September 22 the study mission was further honored at a luncheon given by the Chamber of Deputies of the Republic.

The Dominican Republic, which occupies the eastern two-thirds of the island upon which Haiti is also located, shares few of the latter's economic ills. Much of the area of the Dominican Republic is suitable for agriculture and the country has in excess of 3 million acres of arable land. The technical cooperation program appears to be making good progress in the Dominican Republic, and the degree of cooperation extended by the Government has been excellent. The study mission was greeted warmly by the people of the Republic and every effort was put forth to make the stay pleasant and productive. Adverse weather conditions rendered it impossible for the group to visit several other projects and, in lieu of that, the mission was briefed at length by United States technical experts. At 9:30 a. m., on September 23, the study mission departed the Dominican Republic for San Juan, Puerto Rico.

IV. PUERTO RICO

While there are no technical cooperation programs in the Commonwealth of Puerto Rico, the welfare of the people of the island is a matter of interest and concern to the United States. The study mission arrived in San Juan on September 23, and was greeted on arrival by the personal representative of Gov. Luis Muños-Marín, the first Chief Executive of the Commonwealth to be elected under the provisions of the new Puerto Rican Constitution, drafted by a constituent assembly in Puerto Rico 3 years ago and approved by the Congress of the United States 1 year later. Governor Muños-Marín kindly offered the hospitality of his executive mansion, La Fortaleza, to the subcommittee, which invitation was gratefully accepted. The construction of La Fortaleza was commenced under the governorship of Ponce de Leon, first governor of Spain in Puerto Rico, and has since served as the official residence for the chief executives of the island.

A. ECONOMIC DEVELOPMENT

During its stay in Puerto Rico the study group was driven to the interior of the island to Jayuyo, a coffee plantation, where it had an opportunity to meet with a number of Puerto Rican growers who were desirous of discussing several matters of economic importance with Governor Muñoz-Marín. On the trip out and also on the return trip the mission had an opportunity to see many evidences of the new and spectacular economic development taking place in Puerto Rico. The Puerto Rican government has recently guaranteed foreign investments in the island, and, in addition, has waived the payment of all corporate taxes for new business and industry for a period of 10 years. With these incentives, more than 3 new enterprises are starting every 7 days in Puerto Rico, and the island is enjoying an unprecedented industrial boom. The coffee crop is good and for the first time in many years some thousands of tons will be available for export. The Puerto Rican experiment in industrialization is of tremendous importance to the United States. All of Latin America is watching the island to see what will happen when foreign industry is encouraged to make capital investments. To date there is every indication that the experiment will be a success, in which case it will be much easier to create a favorable climate for new investments needed by other Republics throughout the hemisphere. In some of the other countries strong nationalist feeling and the voice of the demagog have combined to render almost impossible the successful conduct of foreign enterprise and have served to discourage private capital investments. It is important that the Puerto Rican experiment succeed and that the example be placed before all of the world.

B. PUBLIC HOUSING

Under the able and farsighted leadership of Governor Muñoz-Marín,[1] the Puerto Rican government has embarked upon a major

[1] See appendix C, message of Gov. Luis Muñoz-Marín to Puerto Rican Legislature, 1950.

program of aided self-help in public housing. For little more than $300 a Puerto Rican worker can obtain all of the materials necessary for the construction of a two-bedroom house, if he is willing to join with not less than 10 of his neighbors in the erection of a number of the dwellings. All of the work is performed by those who are to live in the houses, and the concrete blocks which go into the construction of the buildings are made by a hand-operated machine loaned to the builders by the government. The worker has up to 30 years to repay the government loan, and supervision is furnished by the government to the workers during the construction period. The subcommittee believes that this is a sound and logical approach to the problem of housing in this part of the world, and that it bears no relation whatever to the socialization of housing as has been charged in some quarters. When the 10 or more houses in a project are completed, lots are drawn by the builders, thereby assuring that the workmanship in each of the homes will be of the best, inasmuch as no worker knows which of the homes being built will be his when finished. In addition, upon completion of a mutual self-help housing project, the government will furnish materials and supervision for the construction of a school, a hospital, or other needed community facilities. The program has been so successful that it is a model for other aided self-help programs throughout the Caribbean area.

V. TRINIDAD

A. BACKGROUND

Trinidad is located close to the north coast of South America, off Venezuela. The island is 50 miles long and 37 miles in breadth. It has an area of 1,864 square miles and, together with the island of Tobago, has an estimated population of 618,603. Port of Spain, with a population of 110,000, is the largest city in the British West Indies. The two islands of Trinidad and Tobago were amalgamated for administrative purposes in 1889. Both the islands are rocky and steep. In Trinidad three mountain ranges run from east to west, while Tobago is a volcanic formation and is dotted with conical hills and ridges. The most individual feature of the Trinidad landscape is the famous Pitch Lake in La Brea on the southwestern shore of the island. The lake covers 109 acres.

Trinidad was discovered by Columbus in 1498, and claimed for Spain. A century later it was visited by Sir Walter Raleigh and during the 17th century was raided by the Dutch and French. In 1783 the King of Spain issued a proclamation encouraging Roman Catholics of all nations to settle there, which caused a large influx of non-Spanish, and particularly French, settlers. In 1797, during wars between Britain and Spain, the island capitulated to British forces from Martinique, and in 1802 it was formally ceded to Britain by the Treaty of Amiens.

Trinidad is administered by a governor, an executive council, and a legislative council. During its overnight stay at Trinidad, the members of the study mission group were the guests of the present governor, Maj. Gen. Sir Hubert E. Rance, at Government House.

While there are no technical cooperation programs operating on the island, its strategic location in the south Caribbean renders Trinidad important in hemispheric defense plans. Under agreements negotiated in 1941, the United States obtained the use of areas on the island of Trinidad for a period of 99 years for use as defense bases. The United States also operates a naval station in Trinidad.

The subcommittee was privileged to meet and discuss matters of mutual interest with Secretary General Eberhard F. H. de Vriendt, head of the Caribbean Commission. Inasmuch as the United States is a member of the Commission, the following data on the activities of the body are set forth below:

B. CARIBBEAN COMMISSION

The Caribbean Commission is an intergovernmental organization composed of the Governments of France, the Netherlands, the United Kingdom, and the United States. It was formally established in 1946 as an advisory and consultative body to these member governments and the 15 territories under their administration in the Caribbean area. Its primary responsibilities are to study, formulate, and

recommend measures which will bring economic and social advancement to the 6 million peoples of this far-reaching area. Its present emphasis is in the economic field, particularly (1) agricultural, forestry, and fisheries development; (1) industrial development; and (3) housing. Basic education was added to these activities in 1952 at the request of the peoples through their representatives to the West Indian Conference.

The Commission maintains a permanent headquarters in Trindad which services the Commission and its auxiliary bodies—the Caribbean Research Council and the West Indian Conference.

The Research Council and its six research committees provide an opportunity for scientific and technical workers in the area to meet periodically to exchange views and information, to assess the needs of the area, and to formulate projects for the development of technical cooperation on a regional basis.

The West Indian Conference is composed of political and governmental leaders of the territories, chosen according to the various constitutional procedures, and is directly representative of the peoples of the area. It has developed increasingly as an important forum for expression of needs and desires for economic and social betterment as well as political aspirations.

The member governments cannot ignore the significance of recommendations directly emanating from the peoples through their recognized leaders.

In addition to a natural concern for the Commonwealth of Puerto Rico and the Virgin Islands, the United States has other legitimate interests in the area, both economic and strategic. The economic advancement and political stability of this area, so geographically close to the United States, must ever be borne in mind in the development and inplementation of our foreign policy. The Caribbean area will long remain a source of strength to the United States as a manpower reserve in the agricultural field, as the site of the 99-year leased bases, and as the source of two essential raw materials—oil and bauxite.

The Caribbean Commission occupies a unique position in that it is the only intergovernmental organization dedicated solely to the economic and social betterment of the 6 million peoples living in the Caribbean dependencies of the United States, Britain, France, and the Netherlands, and is the only continuing organization which cuts across political and national lines. Peoples in the Caribbean dependencies are somewhat sophisticated politically and more than somewhat cynical about surveys and investigations which do not produce concrete results. The Commission has, over a period of years, been able to win the confidence, respect, and cooperation of government officials and politicians. Projects such as the low-cost housing program bring its word down to the level of the mass of the populations.[1]

The biennial West Indian Conference has been referred to often as "the Parliament of the West Indies." This Conference was the first in the history of the world where delegates were directly representative of peoples from non-self-governing territories. Three present governors in the British West Indies—Trinidad, Barbados, and the Leeward Islands—have served as Commissioners and have a keen interest in its work.

[1] See Surinam, low-cost housing.

VI. BRITISH GUIANA

On September 26, the study mission departed Port of Spain for Georgetown, British Guiana. There are no technical cooperation programs in effect in British Guiana at this time, but the strategic importance of the area cannot be underestimated. In addition, all of the Guianas produce one or more strategic ores and metals which would be of vital importance to all of the nations of the Western Hemisphere in the event of hostilities in the future which might disrupt established production and lines of supply.

A. BACKGROUND

British Guiana is the only British colony on the mainland of the South American Continent. It lies on the northeastern coast of the continent between parallels 1° and 9° north and meridians 57° and 61° west. It has a coastline of about 270 miles extending almost from the eastern mouth of the Orinoco River to the Corentyne River, and is bounded on the north by the Atlantic Ocean and on the south and west by Brazil, on the east by Dutch Guiana (Surinam), and on the northwest by Venezuela. It varies in depth from 540 miles on the western to 300 miles on the eastern side. The area of the colony is approximately 83,000 square miles, or roughly the combined areas of England, Scotland, and Wales. It has a population of 450,000 persons.

Sir Walter Raleigh reconnoitered the lower Orinoco in 1595, looking for the legendary El Dorado. The earliest permanent settlements on the coastline between the Amazon and Orinoco Rivers were established by the Dutch and British in the early 17th century. The various settlements changed hands several times, and what is now British Guiana was ceded to Britain by Holland in 1814. At that time it consisted of two separate colonies, Demerara and Berbice. These were unified as a single colony of British Guiana in 1831.

The present constitution provides for a governor, a bicameral legislature consisting of a lower chamber, the house of assembly, and a revisionary upper chamber, the state council, with members nominated by the governor. The executive council is composed of the governor, 3 ex-officio members, 1 member elected by and from the state council, and 6 members of the house of assembly elected from among their number. The present governor of British Guiana, and host to the study mission during its 1-day stay in the colony, is Sir Alfred Savage.

B. RECENT EVENTS

The recent political history of British Guiana has been marked by a series of disturbances which culminated on October 9, 1953, in the dissolution by the British Government of the legislative bodies and the suspension of the constitution. These steps were taken by the British Government several weeks after the visit of the study mission.

While a strike was in effect among sugar workers and considerable tension had developed, there were no untoward incidents during the period of time the group was in British Guiana.

While it is always difficult to determine at what point extreme nationalism merges with Communist influence, it is reasonable to state that a considerable measure of Communist infiltration into government has occurred in British Guiana. Several of the leaders in agitation are self-professed Communists, while there is considerable evidence to sustain the allegation that others are either themselves members of the Communist Party or so greatly in sympathy with the aims and goals of the conspiracy that any distinction between them and party members is academic.

His Excellency, Governor Savage, was most hospitable in his role of host to the study mission.

VII. SURINAM (DUTCH GUIANA)

A. BACKGROUND

Surinam, or Netherlands Guiana, is a territory of the Netherlands. It is situated on the northeastern coast of South America, and is bounded on the north by the Atlantic Ocean, on the south by Brazil, on the east by French Guiana, and on the west by British Guiana. Surinam has an area of 54,300 square miles.

The present population of Surinam is approximately 200,000, consisting of Creoles (Negroes and their mixtures with Europeans), Indians (from India), Javanese, Chinese, and aboriginal Indians. The Bush Negroes, who live in the jungles of the territory, are the descendants of escaped slaves. Slavery was abolished in 1863 in Surinam.

Surinam ships 3 million tons of bauxite annually to the United States. Other exports of the territory are timber, balata, citrus fruit, and rice to other countries. There are no domestically manufactured products of importance.

Since 1949, Surinam has had its own responsible Government of 6 Ministers and a House of Representatives of 21 members elected by popular vote.

The capital of Surinam is Paramaribo, a city of approximately 70,000 inhabitants.

The Netherlands Government is making investments in Surinam through the so-called prosperity fund. The Surinam Government has expressed an interest in a loan from the World Bank to finance the construction of a hydroelectric power station. United States aid had been confined to the loan of two housing experts, who were in Paramaribo temporarily to establish a self-help housing project. These two experts were assigned by the Technical Cooperation Administration (TCA) under the auspices of the Caribbean Commission. However, a Foreign Operations Mission was officially established in Surinam on April 29, 1954. The cooperative program includes studies of the needs for economic development and the resources which are available to meet these needs, formulation and continuous adoption of a program to help meet such needs, and projects in agriculture, public health, sanitation, elementary, rural and vocational education, transportation and distribution, housing, and such other fields of activity as are related to the economic development of Surinam.

Shortly after its arrival in Paramaribo, the study mission proceeded to the Government House, where an official welcome was extended by Dr. M. de Niet, Attorney General, and Acting Governor of Surinam during the absence of Dr. J. Klaasesz, Governor of the territory, who was in Holland attending a Netherlands trade exposition at the time. A number of Dutch and Surinam officials were present at the reception, and the mission was made to feel that their presence in Surinam was welcomed. This feeling was later borne out by the very fine coop-

eration of Government officials and other citizens in facilitating the visits of the group to the bauxite properties and the housing projects.

B. BAUXITE

Surinam's bauxite mines have furnished 50–55 percent of the United States total supply in the postwar period, and 80 percent of our imports of that mineral. Bauxite is the primary export of Surinam, and practically the whole output goes to the United States and Canada.

The bauxite deposits in Surinam are of a very high grade. For every 4 tons of ore mined from the open pits, a ton of aluminum is fabricated. The mining operations are located close to water transportation facilities, and the study mission had an excellent opportunity to observe the several steps involved in the mining, transportation, drying, and loading of the bauxite ores. Present operations are being carried on in 2 large mines: one conducted by a subsidiary of the Aluminum Corporation of America and the other by a Dutch concern, Billiton Co. The high grade bauxite ore is being extracted on an around-the-clock schedule. The ore deposits which are presently being worked lie relatively close to the surface, requiring only the removal of a topsoil overload which varies to a depth of 90 feet. Exploration for new deposits is being pressed, and the study mission was informed that valuable deposits presently known would insure an adequate supply of bauxite ore for the predictable future. The vital role played by Surinam's bauxite in the hemispheric defense of the Americas is too obvious to require further elaboration at this point.

C. AIDED SELF-HELP HOUSING

The study mission had an opportunity to observe in Surinam another interesting example of aided self-help housing. The program is very similar to that which is being carried forward in Puerto Rico, although the cost of the houses in Paramaribo is approximately $1,500, and contract for repayment of the Government loan is over a 20-year period. Some 90 of the units are being constructed by the workers who will later occupy them. In an area of the world where much of the housing is of a type far below substandard, the sociological implications of a program of this kind cannot be minimized. A house built and owned by a worker represents a very substantial stake in his country and its welfare. He will be less prone to heed the words of the demagog or succumb to the inflammatory agitation of the Communist agent if he and his family are secure in the possession of their own personal living accommodations. The units which the study group observed in the aided self-help housing projects, are individual houses, not on a mass-construction apartment type. The development of a new and vital community spirit is a natural outgrowth of such a community endeavor, as is personified by the workers in the aided self-help projects, and evidences of personal application and mutual cooperation were quite clear to members of the mission.

D. TECHNICAL COOPERATION PLANS

While there are presently no technical cooperation programs in effect in Surinam, a request has been made by that Government to the United States for the consideration of a program. Discussions as to the nature and scope of the projected technical cooperation are presently underway between the two Governments. Officials of the Surinam Government and of the FOA instituted discussions on the program in January 1954, and at the present time four FOA representatives are at work conducting a general survey of feasibility and cost. It is contemplated that the FOA representatives, upon the conclusion of the project survey in Surinam, will proceed to British Guiana for discussions bearing upon requested technical cooperation in that territory. It is contemplated that contracts will be drafted and *servicios* instituted in agriculture, education, and housing. The Surinam Government has already appropriated sufficient funds to meet the local contribution and the United States contribution will be provided for upon the execution of the required contracts.

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VIII. FRENCH GUIANA

A. BACKGROUND

French Guiana is situated on the northeast coast of South America, approximately 4° north of the Equator. It is bounded by Surinam (Dutch Guiana) to the west and by Brazil to the east and south. Its northern boundary is approximately 200 miles of Atlantic coastline. The territory extends about 300 miles from north to south and has an area of 34,740 square miles, approximately the size of the State of Indiana.

1. Topography

The country is divided topographically into a coastal lowland, a thickly timbered hinterland, and the mountains to the south forming the boundary with Brazil. The coastal lowland is a strip about 30 miles deep with savannah vegetation. Behind this is the territory of Inini, which is a heavily forested plateau broken by many valleys and rivers. Some of the rivers are quite large and are the chief means of communication in this undeveloped region, although navigation is seriously hindered by falls and rapids. The mountains to the south rise to a maximum of about 2,700 feet.

2. Climate

The climate is what one would expect from the location: high temperature, high humidity, and excessive rainfall (130 to 170 inches per year with rain falling on 160 to 175 days during the year).

3. Population

The population of French Guiana is estimated to be about 30,000. Exact figures are difficult to determine, since the territory of Inini (the forested plateau which covers most of the area of French Guiana) is sparsely populated with Indians, Bush Negroes, and gold seekers whose numbers are difficult to ascertain. The Department of French Guiana, which lies within the coastal lowland described above, has a population of about 22,000, although this figure has been subject to considerable fluctuation due to the repatriation of prisoners as a result of the closing of most of the penal settlements, including Devil's Island, in 1949. These numbered about 11,000 in 1946 and this number has since been reduced to less than 1,000. Of the estimated 22,000 in the coastal area over half live in the principal city of Cayenne. In the coastal region the population is predominantly Negro.

The former Colony of French Guiana and the Penal Colony (abolished in 1949) were made a "department" of metropolitan France under the Constitution of the Fourth Republic in 1946. The "department" does not include Inini, which does not have departmental status, but which is under the authority of the prefecture at Cayenne. As a "department", French Guiana elects representatives to the National Assembly in Paris.

4. Agriculture

Since slavery was abolished in French Guiana prior to the middle of the 19th century, agriculture has steadily declined to its present very low level. According to recent estimates, only 12 or 13 square miles of land are under cultivation and the livestock population totals only about 400 head. The lack of an effective labor force has been the crippling factor, since the land is potentially able to support a considerable variety of agricultural activities. The convict population never proved to be the answer to the labor shortage and was never of great importance except in mining. Most of the agricultural production of the area is consumed domestically but is not of sufficient volume to avoid importation of foodstuffs. The timber resources are vast but undeveloped and are a potential source of considerable wealth. A variety of very expensive hardwoods are indigenous to the area but the lack of transportation and communications, as well as of labor, has made their exploitation impossible. Port facilities, even in Cayenne, are almost completely lacking.

5. Mining

Mining is the greatest economic activity of the region and has been chiefly concentrated on gold, which is extracted by placer methods. Gold has in recent times accounted for one-third to two-thirds of the total value of exports. Other minerals are present in French Guiana, including bauxite, silver, iron, copper, lead, mercury, phosphates, platinum, diamonds, and marble, but none of these has been mined economically to this time.

B. POSSIBLE IMPROVEMENTS

The relatively advanced conditions in neighboring Surinam and British Guiana suggest that French Guiana's backwardness would respond to a systematic program of internal improvements. The bettering of health conditions by improved sanitation and diet would doubtless increase the effectiveness of the present population and encourage immigration, which has been virtually at a standstill because of the colony's reputation as a penal settlement.

The building of dock, transportation, and communication facilities would greatly enhance economic opportunities and further attract laborers and technicians from other parts of the world as well as private capital.

The plan of reequipment for Guiana, drawn up in connection with the Monnet plan, envisages improvements of this nature, some of which are already underway. Increased immigration has been planned and within the last few years a handpicked group of families of displaced persons has arrived which is being given every assistance by the French authorities with the hope that their success would encourage further immigration. Because of her many postwar economic problems, France has had great difficulty in carrying out projects of this kind even though their urgent need is fully recognized locally.

The subcommittee arrived in Cayenne, French Guiana, on September 29. The group was met by the personal representative of the Prefect, M. Robert Vignon, and was taken directly to the Government House where Mr. Woodward and Congressman Jackson were

guests during the overnight stay. The United States has no technical cooperation program in French Guiana, but the Foreign Operations Administration is assisting the French Government in the training of a number of nationals of that country who are given specialized courses in Puerto Rico designed to equip them on their return home with needed skills and technical competence in varied fields. As has been indicated above, the possibilities for the development of French Guiana are unusual. The country is rich in natural resources and only the lack of adequate transportation and communications has slowed exploitation and exploration. Given a few primary facilities, it is quite possible that the entire area, presently so greatly underpopulated, could care for the human needs of many additional thousands of persons.

IX. BRAZIL

The study mission departed Cayenne on September 30 for Belem, State of Para, Brazil, which city lies at the mouth of the mightiest of waters—the Amazon.

A. BACKGROUND

Brazil is the largest of the American Republics in area and population. Its total area encompasses 3,286,170 square miles, an area larger in size than the United States by another Texas. In this vast area lives a population of approximately 55,772,000, in a score of varying climatic and topographical conditions. The literacy rate in Brazil is 50 percent, a figure materially higher than is found in some of the other Republics. The capital city of Rio de Janeiro is one of the great metropolitan centers of the world, and the spectacular growth of São Paulo is one of the miracles of modern industrialization.

Brazil has long maintained very friendly relationships with the United States, and during World War II the Brazilian expeditionary force fought overseas.

Both the International Bank and the Export-Import Bank have approved loans in power, transportation, agriculture, and highway development in Brazil.

B. RUBBER

Brazil and rubber are synonymous in the minds of most Americans The cooperative rubber program with Brazil began in October 1940 with the signing of a cooperative rubber-research agreement by the Ministry of Agriculture of Brazil and the United States Department of Agriculture. This original agreement is still in force and serves as the basis for our present activities throughout Brazil.

First, a survey of the potential rubber growing areas of the country was made by a team of United States technicians. As a result of this survey it was decided to confine all research activities to the Amazon region, with the Instituto Agronomico do Norte (IAN) at Belem, Para, as the headquarters for all field activities. The cooperation of the Ford Rubber Plantation Co. was obtained to assist in the planned research program.

Hevea nurseries and multiplication gardens were established at the IAN (Institute Agronomico do Norte). Field experiments were outlined and established as rapidly as plant material became available. From 1942 to 1944, extensive jungle collections of Hevea material of many species in numerous areas of the Amazon Basin were collected. These selections were established at Belem and at Belterra plantation of the Ford Co., and were tested for their resistance to South American leaf blight (*Dothidella ulei*). Resistant material was then selected for multiplication and further experimental use in field plantings and for subsequent breeding programs.

From 1942 to 1944 large-scale programs of hand pollinations on Belterra plantation were initiated. At that time the basic breed-

ing program consisted of crossing the high-yielding but disease-susceptible far eastern clones with local resistant but low-yielding material in an attempt to obtain progenies which would combine factors for disease resistance with high yield. Hundreds of thousands of crosses were made. The progenies which resulted from these crosses were shipped to the IAN at Belem for planting and later testing for disease resistance. Resistant selections were then multiplied and established in experimental areas for subsequent testing of their yield potential under local conditions. Many of the better selections from the early crosses have now been distributed widely in Latin America. In cooperation with the IAN, a large breeding program has been conducted each year since 1942. This work is now being done at Belterra.

Since January 1946, when the Brazilian Government purchased the Ford rubber plantations (Fordlandia and Belterra), an increasing amount of the cooperative rubber research and experimental work with the IAN has been conducted at Belterra. The IAN operates the two plantations as a substation. Large experimental plantings have been established. Huge multiplication nurseries are maintained so that the IAN is able to supply budwood of the best clones to all persons interested in planting rubber. Special disease-resistance testing nurseries are used to test the progenies resulting from each years cross-pollination program.

Numerous distributions of planting material from the Belem nurseries to other countries were made during the period 1945–49.

By 1951 the inauguration of the point 4 program, and the rapidly increasing demand for rubber for Brazil's expanding economy, had combined to provide the necessary incentive for an expansion of the cooperative rubber research program. Brazil requested the United States Department of Agriculture to provide additional field technicians to assist in the research and development programs. Interest in planting rubber had been very limited up to this time but now interest increased to such an extent that other sections of Brazil, outside the Amazon Basin, asked to participate in the cooperative program.

The IAN is supplying all the planting materials required for the small farm planting programs in the Amazon Valley. The principal cooperators in the valley are the Banco Credito da Amazonia, the Federal Territory of Amapá, and the State extension services. The bank and the territory are financing the rubber-planting activities of numerous small farmers. To others they are only providing technical guidance through their fieldmen. Seven thousand five hundred acres have already been planted and in 1954 it is estimated that more than 10,000 acres additional will be planted. Distance and lack of adequate transportation make it exceedingly difficult to follow planting activities as frequently as might be desired.

Nurseries, multiplication gardens, and the first experimental plantings have been established at the Una substation, fazenda Victoria, fazenda Mucambo, and at Uruçuca with material received from the IAN, Haiti, and Costa Rica. During 1953 a total of 240 hectares of field plantings of budded material was established by the various cooperators. For 1954 an estimated 1,130 hectares of Hevea will be planted in the state of Bahia. The program is still somewhat limited because of a shortage of suitable planting material. However, this

situation will be alleviated by 1954 when budwood is available from the new budwood multiplication gardens established during the current year.

Dr. Felisberto C. de Camargo, director of the Servicio National de Pēsquīsās Agronomicas, of the Ministry of Agriculture; has recently established a rubber nursery outside Rio de Janeiro. It is his intention to establish a clone museum in this disease-free area, and possibly supply budwood or other planting materials to cooperators in the south of Brazil, mainly in the hot subtropical coastal areas.

The State of São Paulo has undertaken a rubber planting program. This is being directed by the Instituto Agronomico Campinas, and the United States is supplying assistance to research and planting programs. Nurseries have been established at Campinas, Ubatuba, Caraguatatuba, and Santos. Campinas is establishing Hevea breeding gardens on station property. In 1952 a shipment of Liberian clonal seed was received from the Firestone rubber plantations in Liberia. Since South American leaf blight does not occur in the State of São Paulo at the present time, this material can be planted in the field without budding. No resistant crown is required for these trees as long as no disease is present. It is expected that all 25,000 of these seedlings will be planted out in many small farm areas under the supervision of the Instituto at Campinas. The smallest plantings will be 2 hectares. The necessary technical assistance and guidance to this interesting program will continue to be provided. The State of São Paulo is the most southerly point in Latin America where an attempt is being made to plant Hevea rubber.

An integrated program involving all field technicians, the IAN (Instituto Agronomico do Norte (north)), the IAL (Instituto Agronomico do Leste (east)), and the other cooperating agencies in Brazil, is now a reality. Effective liaison with the programs in other countries is maintained and exchanges of rubber plant materials are made whenever necessary or desirable to further the sound expansion of the planting program in any one of them.

While pure research and intensive experimental field work is still very necessary for the best interests of the cooperative rubber program, the development phase of the program is receiving an increasing amount of attention as various problems are overcome.

On the afternoon of their arrival in Belem, the study mission was privileged to visit the extensive laboratories and plant nurseries of the rubber experimentation station (Instituto Agronomico do Norte), the activities of which have been described in detail heretofore. In company with United States and Brazilian technical experts, the group toured the laboratories where experimentation is proceeding toward the improvement of methods and techniques of rubber smoking, determinations of adaptability of disease-resistant strains to certain areas of the country, and the development of technical information which is in turn passed along to rubber growers throughout Brazil. Following the visit to the laboratories, the group toured the rubber nurseries and had an opportunity to witness the several steps involved in budding of the trees and the drawing off of the rubber product in its liquid state.

Upon its return from the agricultural station the group paid a courtesy call on the Governor of the State of Para, His Excellency Alexandre Zacarias de Assumcao.

C. TECHNICAL COOPERATION

1. Principal programs

The principal programs in Brazil under the auspices of the Technical Cooperation Administration are:

Total United States cost, calendar 1953

Agriculture, forests, and fisheries	$859,900
Health and sanitation	904,900
Education	613,600
Natural resources	223,200
Industry and labor	427,500
Transportation	240,000
Public administration	187,600
Joint commission	147,300
Total	3,604,000

Brazil is matching the United States contribution with a cruzeiro amount equivalent to $15,636,000.

Perhaps the most spectacular aspect of the technical cooperation program in Brazil has been the operation of SESP (Servico Especial de Saúde Pública), a far-reaching project designed to raise the general health standards of the Brazilian people, and to initiate a series of needed projects in sanitation and water supply.

2. Public health

The cooperative public health program in Brazil is operating in the Amazon and Rio Doce Valleys, a small area in the State of Bahia, a small area in the States of Paraíba, and Pernambuco, and the São Francisco River Valley; a combined area of 45 percent of Brazil, equal to almost half the continental area of the United States of America.

This program, called the Serviço Especial de Saúde Pública (SESP), is administratively dependent to the Ministry of Education and Health in Brazil and the FOA. The chief of field party, under the guidance of the United States Ambassador and the Country Director, is a United States national. The SESP has a superintendent who is the representative of the Ministry of Education and Health. General policies of operation, control of personnel, and the expenditure of funds are mutually agreed upon between the Minister of Education and Health, or his representative, and the chief of field party.

This cooperative program completed 11 years of operation on July 17, 1953.

Nearly 2,000 Brazilian doctors, engineers, nurses, technical and other personnel, and 18 United States professional and technical experts are employed in the program. The main activities are as follows:

a. Preventive medicine;
b. Medical care;
c. Epidemiologic investigations and vital statistics;
d. Environmental sanitation, including water and sewerage systems;
e. Construction and maintenance of public health installations, health centers, hospitals, laboratories, etc.;
f. Health education;
g. Industrial hygiene;

h. Public health dentistry;
i. Training of professional and technical personnel;
j. Assistance to the National Leprosy Service;
k. Financial and technical cooperation with other health agencies;
l. Administration.

With professional and technical assistance from the United States, as well as a contribution to the program funds, it has been possible to build water systems, hospitals, health centers, greatly reduce the incidence of malaria with modern insecticides, improve nutrition, and to initiate a number of other standard public health activities indispensable to improved living standards and health. United States personnel provide crucial technical services, but without a contribution to the program fund they would be powerless to control the type, quantity, and quality of the work done. An extensive training program is in action within the service, in United States schools as well as in Brazil. More than 252 Brazilian doctors, engineers, nurses, and other technical public health personnel have been trained in the United States, and more than 2,000 within Brazil. The service has introduced good medicines and biological products into vast areas, and has constructed the basic water and sewerage systems in many towns, which has created a great demand for, and increased importation from the United States, of the items indispensable to these systems, as well as stimulating the local production of such materials. Municipal organization with consequent appropriation of local funds for health services has progressed at a satisfactory rate. More than 35 local government bodies have contributed more than US $1,500,000 to the service for work to be done in their respective municipalities.[2]

To carry out the program of this cooperative service, the Brazilian Government has contributed Cr$91,000,000 for the calendar year 1953, and has proposed in its budget for calendar 1954 to contribute approximately Cr$120,000,000 ($6,000,000) which, with third-party contributions, including housing, will amount to approximately Cr$170,000,000 ($8,500,000).

3. Abaetetuba

At 3 a. m. on the morning of October 1, the study mission boarded launches of the SESP *servicio* for a trip upriver to the town of Abaetetuba, for the purpose of seeing one of the technical cooperation projects—a health center—in operation in the field. Abaetetuba was reached at about 10 a. m. on October 1, and the party, which included United States and Brazilian technical experts, went directly to the clinic. As no advance notice had been given the doctors and the nurses at the center, the study group was able to observe the routine and normal operation of the center without the normal restraints which would have accompanied an official visit. Abaetetuba is a typical Amazon village, with a present population of approximately 5,700 persons. It is a river port on the south bank of the Amazon, about 90 miles above Belem, and the members of the group were told that previous to the institution of the health center in the village the population had been approximately 2,000. Of this number it was not abnormal a few years ago to have found more than 75 percent of the village residents incapacitated by malaria, yellow

[2] So-called "third party funds" as distinguished from United States and participating government funds appropriated at Federal levels.

fever, and other endemic diseases. Since the institution of the cooperative project in health, malaria has been completely eradicated and no cases of yellow fever are to be found in or near the village. Venereal disease and yaws have been almost completely eradicated, and the known cases of leprosy are isolated and under treatment. The introduction of adequate supplies of antibiotics and other pharmaceutical products has contributed materially to an increase in life expectancy and has lowered the infant mortality rate in the area to a point where it compares favorably with towns of the same size in more temporate zones. SESP has not limited its activities to the main stream of the Amazon, but has established a number of hospitals, health centers, and clinics on the major tributaries of the river. When one takes into consideration the appalling conditions of public health and sanitation which have combined with climatic conditions to render many portions of the Amazon Basin almost uninhabitable in the past, the results already achieved are especially noteworthy.

At Abaetetuba the subcommittee had an opportunity to see the physical properties of a potable water supply system which has been installed by the technical cooperation teams. For the first time in history the water consumed by the inhabitants of the town is no longer drawn from the muddy Amazon itself, but is pumped instead from deep wells, and piped through a modern system to central distribution points. At the time of the visit of the study group to Abaetetuba, water had been piped to 156 houses. Materials for the construction of suitable outhouses had been made available to the people of the village, and health inspectors and visiting nurses make regular rounds to insure that facilities are properly installed and that public health and sanitation regulations are enforced. Prenatal and postnatal care is furnished by the health center, and a demonstration service is provided in the clinic for the instruction of pregnant and nursing mothers.

While Abaetetuba was the only village visited by the study mission, we were told that scores of like facilities are operating today in even the most remote areas of Brazil.

4. Costs

In the administration of the technical cooperation effort in Brazil, the ratio of costs as between the United States and the Government of Brazil reflects a decided downward trend in the ratio of United States contributions and an increasing upward trend in the appropriations made by the Brazilian Government. The financial statement from 1942 to, and including, 1953 is as follows:

Financial statement of the cooperative public health program between the United States of America and the United States of Brazil

I. Appropriations to the Serviço Especial de Saúde Pública (SESP) according to International Agreement:

Calendar year	Brazil cruzeiros	United States		Total cruzeiros
		Dollars	Cruzeiro equivalent [1]	
1942-43	9,000,000.00	5,000,000.00	98,576,716.80	107,576,716.80
1944	10,000,000.00	1,250,000.00	24,750,000.00	34,750,000.00
1945	20,000,000.00	500,000.00	9,800,000.00	29,800,000.00
1946	20,000,000.00	500,000.00	9,800,000.00	29,800,000.00
1947	20,000,000.00	500,000.00	9,250,000.00	29,250,000.00
1948	30,000,000.00	250,000.00	4,595,000.00	34,595,000.00
1949	50,000,000.00	250,000.00	4,595,000.00	54,595,000.00
1950	70,000,000.00	215,000.00	3,951,700.00	73,951,700.00
1951	75,000,000.00	200,000.00	3,676,000.00	78,676,000.00
	1,000,000.00	50,000.00	919,000.00	1,919,000.00
1952	75,000,000.00	300,000.00	5,514,000.00	80,514,000.00
1953	91,000,000.00	300,000.00	5,514,000.00	96,514,000.00
Total	471,000,000.00	9,315,000.00	180,941,416.80	651,941,416.80
Interest, etc				6,755,610.10
II. Third-party contributions through June 30, 1953 [2]				217,172,863.00
III. Cost of United States personnel through June 30, 1953 [3]				61,248,956.20
IV. Grand total				937,118,846.10

[1] Various rates of exchange have been used according to the official determinations of the Brazilian Government ranging from 18.38 cruzeiros to the dollar to 19.80.

[2] Contributions from local, municipal, and state governments and other groups or agencies made to SESP to finance additional health services for the people in the areas making the contribution

[3] It is estimated that approximately US$890,496 have been spent by the institute (HWH) on 268 fellowship grants for professional trainees in the United States or a cruzeiros equivalent of Cr$16,367,316,50. This figure is not included in IV. Grand total. Also not included in the above statement are contributions other than cash (i. e. land donations, reduced transportation costs, customs duties exemption and free postal and telegraph services) by the host government and other Brazilian agencies. This figure is estimated to be US$1,319,328 or Cr$24,249,248,60.

Out of the total dollar cost to the United States of $9,315,000, the employment of technical and other assistants has amounted to $3,234,488.22, as detailed below.

Cost of United States personnel in cooperative public health program (SESP), Brazil

	TOA [1] expenses	Official rate exchange	Cruzeiros equivalent
Calendar year—			
1942	$26,996.75	Cr$19.176	Cr$532,267.90
1943	113,727.07	19.176	2,242,242.90
1944	668,022.70	19.80	13,226,849.50
1945	221,671.39	19.80	4,389,093.50
1946	221,037.19	19.80	4,376,536.40
1947	281,810.50	18.50	5,213,494.30
1948 (January-June)	186,507.75	18.38	3,428,012.40
Fiscal year—			
1949	282,077.96	18.38	5,184,592.90
1950	327,902.47	18.38	6,026,847.40
1951	247,112.85	18.38	4,541,934.20
1952	306,068.57	18.38	5,625,540.30
1953	351,553.02	18.38	6,461,544.50
Total	3,234,488.22		61,248,956.20

[1] Technical and other assistants.

Presented graphically, the ratio of costs and the gradual transference of responsibility for the conduct of the health program is represented in figures 2 and 3.

5. General observations

All of the physical installations observed by the study mission in Belem and Abaetetuba were suitably marked to indicate that they were cooperative projects between Brazil and the United States. Again the study mission was impressed by the friendly warmth of the greeting extended to us by the Brazilians, especially in and near the areas where health and sanitation projects were in operation. Human pain is a fundamental and universal language, and it is believed that the programs which extend to the very lowest levels to bring relief and cure are the programs which reflect the greatest measure of return in gratitude and friendship. Although language barriers make it difficult to assess practical results in conversations with those who have been the beneficiaries of the program except through the medium of translation, the mission gained a definite impression that the people of Abaetetuba knew that a measure of their new life was due to the assistance given them by their neighbors from the north.

D. SÃO PAULO

The city of São Paulo is the industrial heart of Brazil. It is also the nation's largest metropolis, numbering an estimated 2,610,000 persons. In the city of São Paulo there are approximately 2,500 United States nationals, and the United States Chamber of Commerce in that city with its 1,060 members is one of the largest American business groups outside of this country. São Paulo lies approximately 220 air-miles southwest of Rio de Janeiro, and 30 air-miles inland from the Atlantic port of Santos. São Paulo comprises the greatest industrial concentration in Latin America, with some 25,000 establishments throughout the State. The principal industries of São Paulo are textiles, food processing, ceramics, glass, chemicals, pharmaceuticals, metallurgical, and automobile assembly. The estimated direct United States investments in the State of São Paulo total approximately $425 million or between 50 and 60 percent of all United States investments in Brazil. While the study mission had only a few hours in which to see the city and view the evidences of its spectacular growth, it did have an opportunity to attend a briefing conducted by the United Stares consul general, Clarence C. Brooks, and to acquire a considerable amount of information on political, economic, and social matters relating to the immediate area. Following attendance at the annual reception given by the Veterans of Foreign Wars of the United States resident in São Paulo, the study mission returned to Rio de Janeiro.

E. THE BRAZIL-UNITED STATES INSTITUTE

On October 4, the group visited the United States Information Service and the Instituto Brasil-Estados Unidos (the Brazil-United States Institute), which facility constitutes the cultural point of contact for nationals of Brazil and the United States in Rio de Janeiro. Dr. Jose Salles de Oliverra Coutinho, president of the Institute, and other members of the board conducted the study mission through the Institute and, following this, a round-table discussion was had. The Institute consists of a main library building and a branch library located in a low-income section of Rio de Janeiro.

Approximately 3,000 students attend classes which are conducted in the Institute, and which feature English classes for Brazilians and classes in Portuguese for United States citizens. The activities of the Brazil-United States Institute have had a wide acceptance from the people of Rio de Janeiro, and the group is presently embarked upon a project for the construction of new and enlarged quarters. All members of the present board of directors have been in the United States on scholarships and the subcommittee was urged to lend any assistance possible in the extension of the scholarship program. Three United States nationals are presently teaching at the Institute, and the hope was expressed by board members that two more teachers could be provided from some source. Dr. Jose Salles de Oliverra Coutinho, president of the Institute, has written an interesting and comprehensive history of the Instituto Brasil-Estados Unidos which will be found in this report as appendix D.

F. MEETINGS WITH UNITED STATES REPRESENTATIVES

Following the visit to the Institute the study mission, together with Ambassador Kemper and other officials of the United States Embassy, were guests at a luncheon given by the American Chamber of Commerce of Rio de Janeiro in honor of Mr. Jackson. Previous to the luncheon meeting a discussion was had with the board of directors of the chamber of commerce relative to general problems attendant on the investment of private capital in Brazil. Following the luncheon meeting Congressman Jackson addressed the group on the technical cooperation program and other matters.

G. GENERAL OBSERVATIONS

Although the report on technical cooperation in Brazil has stressed the health and sanitation projects, the entire program is on a much greater scale. While the subcommittee obviously could not devote sufficient time while in Brazil to a comprehensive study of the many projects in education, natural resources and labor, transportation, public administration, and the effective work of the joint commission, all of these projects are moving forward on schedule and are in varying degrees succeeding in improving and strengthening these areas of primary concern. The emphasis which has been placed on health and sanitation in this report is in no way intended to minimize either the importance of the other projects or the excellent work which is being done by the United States nationals and their Brazilian counterparts in those areas.

On October 6 the study mission departed Rio de Janeiro for Montevideo, Uruguay, arriving there at 10:55 a. m. on the same date.

X. URUGUAY

Upon the arrival of the mission at Carrasco Airport, Montevideo, it was met by a delegation headed by the United States Ambassador, Edward L. Roddan, and Dr. Grunwaldt Cuestas, Director of Protocol of the Uruguayan Foreign Office, together with members of the Embassy and Foreign Office staffs. The mission proceeded directly to a briefing session at the Embassy chancery and in the late afternoon paid an official call on the National Assembly of Uruguay. The welcome of the Assembly was given by Dr. Jose A. Quadros, chairman of the Foreign Relations Committee, Chamber of Deputies, who acted as host and spokesman for the legislators.

A. BACKGROUND

Uruguay, consisting of 72,153 square miles, is slightly larger than North Dakota, and is the smallest country in area in South America. The population is estimated to be about 2,400,000, and the literacy rate of 80 percent is one of the highest in Latin-America. The people of Uruguay are intensely and properly proud of the high order of democratic processes which have been developed in their republic and every effort was made by Government officials and citizens alike to facilitate the work of the study group in that country.

B. TECHNICAL COOPERATION

Technical cooperation is being carried out in the following fields:

1. Health and sanitation

The cooperative program in the field of health began in November 1943. Uruguay has developed a rather comprehensive program of curative medicine, including the operation of hospitals and clinics in each department of the country. The emphasis, therefore, of the cooperative health program was and is in the field of preventive services. A contribution of substantial importance was the initiation and financing of a University School of Nursing which graduated its first class of 21 well-trained girls in May 1953. In the same month the school was turned over to the National Government for operation and ceased to be a *Servicio* project—in accordance with the philosophy of the technical cooperation program. Five demonstration health centers, the first in Uruguay, are showing the advantages of preventive medical services in the fields of maternal and child health, the control of tuberculosis and venereal diseases, health education for the public and control of the sanitary environment.

2. Census and economic statistics

Since January 1953, technical assistance in the field of economic statistics, including planning for a population and housing census, is being rendered through the services of a United States consultant. Uruguay has made $4,000 available for incidental expenses in connec-

tion with this program. The Uruguayan Congress authorized the creation of a statistical advisory board and provided funds in its 1953 budget for the taking of a population census. The last census was taken in 1908. Estimates of population vary from 1,800,000 to 3,800,000.

3. Industrial safety

Since May 1953, technical assistance has been given to Uruguay in industrial safety through a United States consultant. Uruguayan personnel is being trained, safety courses are being prepared, and rules and regulations for safety in industry are also being prepared under existing laws. In carrying out this program the Uruguayan Government contributes with office space, clerical help, and transportation when necessary.

4. Public administration

Technical assistance in public administration is being rendered to the Interministerial Commission on Public Purchasing, in purchasing, and to the Ministry of Public Health, in purchasing, supply, and warehousing. Requests have also been received from several Government agencies in improving personnel systems. Training in budgeting, personnel, and supply has been initiated.

5. Agriculture and livestock

The cooperative agreement for technical assistance in agriculture and livestock was executed in March 1951 but, inasmuch as the agreement has not yet been ratified by Parliament, no active projects in this field have been undertaken.

6. Other programs

Interest has been manifested by Government agencies in an industrial productivity program, housing, and a project for the elimination and determination of unhealthy conditions in industry.

The attitude of the Government, autonomous public agencies, and the public toward technical assistance programs in Uruguay is satisfactory. This attitude is not only reflected in press articles and editorials but in the statements of Government officials on formal and informal occasions and in their daily contacts with FOA technical personnel.

The ratio of Uruguay's contribution to the *Servicio* programs in health and sanitation has been maintained at $5 to $1. In addition to cash, contributions in kind such as buildings, office space and facilities, local travel and personnel aid are furnished by Uruguay. Ratification by the Uruguayan Legislature of the basic technical assistance agreement, signed March 15, 1951, is still pending.

Technical cooperation program in Uruguay

	United States funds	Uruguay funds	Other funds	United States personnel [1]	Uruguay personnel
Calendar year—					
1943				4	
1944	[2] $500,000	$100,000		4	16
1945			$637.34	4	18
1946			1,661.42	4	11
1947				4	9
1948	[3] 261,767	150,000		4	10
1949	93,000	250,000		4	10
1950	98,500	250,000		4	11
1951	[4] 171,135	250,000		7	11
1952	274,159	250,000	4,109.59	12	15
1953	295,930	254,000		9	15
1954	[1] [5] 464,742	250,000		19	15
Proposed, fiscal year 1955	379,000				

[1] This includes an estimation of salaries for 1954.
[2] Basic agreement HWH, Nov. 18, 1943.
[3] Extension agreement, Jan. 3, 1948.
[4] Includes $50,000 ANR allotted but not expended.
[5] HWH and industrial productivity.

Technical cooperation in health, Uruguay

	United States funds	Uruguay funds	Other funds	United States personnel [1]	Uruguay personnel
Calendar year—					
1943				4	
1944	[1] $500,000	$100,000		4	16
1945			$637.34	4	18
1946			1,661.42	4	11
1947				4	9
1948	261,767	150,000		4	10
1949	93,000	250,000		4	10
1950	98,500	250,000		4	11
1951	102,409	250,000		4	11
1952	89,322	250,000	4,109.59	4	15
1953	106,871	[2] 4,000 / 250,000		5	15
1954	[3] 107,000	250,000		6	15
Proposed, fiscal year 1955	126,200				

[1] Basic agreement Nov. 18, 1943.
[2] Contributed by Uruguayan Government to help defray expenses of statistical and census consultant.
[3] This includes an estimation of salaries for 1954.

Industrial productivity, Uruguay

	United States funds	Uruguay funds	Other funds	United States personnel [1]	Uruguay personnel
Calendar year 1954 (total)	[1] $154,942			5	

[1] This amount has been included in the budget for 1954; however, no funds have yet been allocated as the project agreement between the Uruguayan Government and the United States is not yet signed.

Public administration, Uruguay

	United States funds	Uruguay funds	Other funds	United States personnel [1]	Uruguay personnel
Calendar year—					
1952	$9,651.15			1	
1953	22,028.75			2	
1954	[1] 45,775.00			3	
Total	77,454.90				

[1] This figure includes 1 regional employee assigned to Uruguay.

Housing, Uruguay

	United States funds	Uruguay funds	Other funds	United States personnel [1]	Uruguay personnel
Calendar year 1954 (total)	[1] $12,600.00			1	

Training, Uruguay

	United States funds	Uruguay funds	Other funds	United States personnel [1]	Uruguay personnel
Calendar year—					
1952	$75,816.16				21
1953	86,929.64				22
1954	[1] 81,900.00				21
Total	244,645.80				

Technical and scientific services, Uruguay

	United States funds	Uruguay funds	Other funds	United States personnel [1]	Uruguay personnel
Calendar year 1954 (total)	[1] $25,025.00			2	

Administrative expenses (28–109–4), Uruguay

	United States funds	Uruguay funds	Other funds	United States personnel [1]	Uruguay personnel
Calendar year—					
1952	$21,797.87			2	
1953	58,710.72			2	
1954	[1] 36,500.00			2	
Total	117,008.79				

ANR, Uruguay

	United States funds	Uruguay funds	Other funds	United States personnel [1]	Uruguay personnel
Calendar year—					
1951	[1] $68,725.78			3	2
1952	77,672.20			5	2
1953	21,389.79				
1954	1,000.00				
Total	168,687.77				

[1] This figure includes 50,000 alloted for projects but not expended.

XI. ARGENTINA

The study mission arrived in Buenos Aires, the capital city of the Argentine Republic, on October 7, and was greeted at the airport by United States Embassy officials and representatives of the Argentine Foreign Office.

Buenos Aires is the ninth largest city in the world and the third largest metropolis in the Western Hemisphere, with a population of 3,367,729. Argentina's total population is 18,056,000. The country is the second largest in Latin America and covers an area roughly equivalent to all of the United States east of the Mississippi River.

Argentina has made no requests of this country for technical cooperation projects, but the study mission utilized the short period of time available in Buenos Aires to pay courtesy calls on the Foreign Minister, Jeronimo Remorino, and to visit the Chamber of Deputies at the invitation of the legislators.

Mr. Jackson addressed a luncheon meeting given by the American Chamber of Commerce and, on October 9 the study mission departed Buenos Aires for Santiago, Chile.

XII. CHILE

On October 9 the study mission arrived in the capital city of Santiago, Chile, at 12:55 p. m. The mission was greeted at the airport by Chargé d'Affaires Carlos Hall and representatives of the United States Embassy and the Chilean Foreign Office. Courtesy calls were paid upon President Carlos Ibanez del Campo and Foreign Minister Oscar Fenner Marín on the afternoon of the same day. A press conference was held by Mr. Jackson at the Embassy Chancellery, and in the evening Mr. Jackson was the guest of honor at a reception given by Foreign Minister Fenner.

A. HUACHIPATO

On the following day the study mission flew to Huachipato, Chile, site of a new steel mill and rolling plant, the financing for which was done in part by the Export-Import Bank and in part by Chilean private capital. The plant, the largest of its kind in Latin America, represents a revolutionary endeavor and the study mission was much impressed by the tour of the facility. Most of the raw materials necessary for the operation of the mill and plant are available in Chile, with iron ore coming from El Tofo and La Serena, limestone from Isla Guarello, and dolomite from El Maule. The assets of the operating company in 1952 amounted to $107,850,492.90. In that year steel ingot production was 242,591 tons, exceeding the 1951 figures by 64,273 tons, or 36 percent. During 1952 the output of finished products—plate mill, merchant mill, and pipe mill—reached 181,000 tons, an increase of 39 percent. While figures on exports for 1953 are not available at the moment, the Huachipato plant exported $7,300,000 worth of its products during 1952. Argentina, the principal customer, purchased products valued at about $5 million.

While the Huachipato plant is in no way connected with the program of technical cooperation, the study mission members welcomed an opportunity to see this considerable addition to the economy of the country. More than 5,000 Chilean nationals are presently employed in the operation, and a considerable program of housing is being pressed in the near vicinity of the plant operations.

The administrative and technical direction of the plant is carried on by the United States and other nationals, but a program of inservice training is in effect, looking to the gradual assumption of additional technical and managerial duties by Chilean engineers and technicians.

B. TECHNICAL COOPERATION

Since 1943 the Institute of Inter-American Affairs has been engaged in an effective program of assisting Chile in the field of health and sanitation. The work accomplished has been truly cooperative, with the Chilean Government providing the greater part of the funds (fiscal year 1953: United States, $1,180,000; Chile, $2,800,000). The

improvement of sanitation has been a primary target and has resulted in the construction of 359 kilometers of sewers, 3 sewage disposal plants, and the provision of wells and water supply systems for small towns. The remaining funds have gone into the construction of five health centers, studies in soil conservation, artificial insemination, and projects for the improvement of crops. Since the inability of Chile to produce adequate supplies of food is a basic economic problem, the agricultural program is now of primary interest, although the health and sanitation work continues undiminished. Additional projects are underway to increase the productivity of small industry, improve low-cost housing, and provide assistance in public administration.

C. COPPER

As the word rubber brings to mind the great Amazonian plantations, so does the word copper connote Chile. Inasmuch as the economy of Chile and the position of that country in terms of international trade and balances of payment is closely related to the production and sale of copper in the world markets, it is believed that a further detailed exposition of this subject would be of interest in this report. The study of Chilean copper production and its relation to other world producers will be found as appendix F to this report.

XIII. PERU

A. GENERAL OBSERVATIONS

The study mission arrived at Limatambo Airport, Lima, Peru, from Santiago, Chile, on Sunday, October 11. Deputy Chief of Mission John P. Davies and members of the Embassy staff greeted the group on arrival.

Monday, October 12, was a holiday, but officers of the United States mission were at the Embassy chancery at 9 a. m. for the purpose of briefing the visiting group on economic, political, and military matters. Following the briefing session, Mr. Jackson, accompanied by Mr. Davies and others, proceeded to the Christopher Columbus Monument on one of Lima's main thoroughfares, where a wreath was laid in memory of the great captain and navigator.

The mission departed for La Paz, Bolivia, the following morning, and returned to Lima from La Paz on October 15. Mr. Jackson addressed the American Society that evening and there was a general discussion with members of the United States business community on problems of mutual interest, with particular reference to the program of technical assistance. It should be stated at this point that without exception the United States business representatives abroad expressed themselves in strong support of the cooperative program as it is presently being conducted throughout Latin America. Some suggestions were offered in several of the meetings referred to, and constructive criticism was directed at several of the operations. In general, however, it can be said that United States citizens resident in the Republics view technical cooperation with high favor and seek not only its continuation, but expansion of meritorious programs and projects. The universality of this expression lends strength to the belief that technical cooperation furnishes an excellent medium for the lending of assistance which dignifies both parties.

On October 16 the study mission, in company with United States technical cooperation officials, motored south from Lima to visit a new agricultural project near the San Juan River in the vicinity of Pisco. The unusual nature of the enterprise and the potential value of the completed project rendered the trip one of the most interesting made during the course of the entire study mission.

Peru, except for its coastal valleys, is largely desert on the west coast. For miles at a stretch nothing is seen but great sand dunes and flat, infertile soil. Water is at a premium, but where it is available the desert literally blossoms.

The technical cooperation program has been particularly successful in Peru, due in large part to the natural resources of the land, but in equal part to splendid cooperation by government ministries in the establishment and operation of the servicios. The program in Peru, which will be detailed at greater length hereafter, is diversified and productive.

Eight thousand acres of arid land have been allocated by the government to 200 farmers. The nearest source of water is the Rio Chico, a branch of the larger San Juan, located several miles from the project. The problem of transporting the water to the project was complicated by an intervening series of low hills between the land to be irrigated and the river.

Engineering plans were drafted by United States technical experts for a tunnel through the considerable hill mass, and for a canal for the further transport of the river water to the project. The most unique aspect of the undertaking is the provision whereby those who are to be landholders in the project when the water becomes available are contributing the necessary labor. Without previous training and with no specialized skills, the farmers, under the direction of United States and Peruvian technicians, have completed the tunnel and are nearing completion on the canal. All of the work has been done by hand, and the final delivery of the water to the farmers' land will constitute a great tribute to the determination of the workers and the skill of the technicians. The study group was greatly impressed by the friendly greeting accorded it by the Peruvian workers along the canal and at the tunnel operation.

Peru is fortunate in having a generally well-diversified economy and is not dependent on only one or a few export commodities. Even though Peru's role as a supplier of strategic materials has been declining in past years, it is still an important source of lead, zinc, vanadium, bismuth, cotton, and sugar.

Since the Odría administration came to power in 1948, Peru has adopted a number of economic and financial reforms aimed at freeing the economy from government controls and fostering development through private enterprise. The Klein (Assistant Secretary of Commerce in Hoover administration) mission, an economic and financial advisory group under contract to Peru, has been instrumental in obtaining adoption of many of these reforms, but due credit must be given President Odría for his political courage in approving the reforms at a time when most other Latin American countries are following opposite courses.

Peru has abolished foreign exchange and most import controls, balanced Government budgets, and utilized indirect controls on credit and monetary expansion. A new mining code adopted in 1950 has made mining ventures attractive and private investments have increased notably. A new petroleum law approved in 1952 also has provided an attractive investment climate, and a considerable number of domestic and foreign oil companies has obtained new exploration and exploitation concessions. The exploitation of iron ore deposits in southern Peru and the prospective investment of $160 million in the Toquepala (American Smelting & Refining) copper mines are two notable examples of new mining ventures. The Toquepala project has been widely anticipated and failure to proceed with it will bring strong repercussions in Peru.

Since the United States is Peru's most important trading partner, United States trade policies are a matter of serious concern to Peru. Proposals in our Congress for United States tariff increases on tunafish imports would seriously damage Peru's nascent fishing industry and have been the subject of extensive and severe criticism in Peru. Proposals for a sliding-scale tariff on lead and zinc imports into the

United States have been viewed with even more alarm by Peru. At a time when Peru is following a course of stimulating private enterprise and ostensibly emulating the United States, the Peruvian Government views restrictive trade proposals in the United States as especially damaging to their commendable efforts.

In the postwar period, the Peruvian Government has obtained only two foreign loans, $1.8 million for an agricultural machinery pool program and $2.5 million for port improvement at Callao, both from the International Bank for Reconstruction and Development (IBRD). Delay in settling its defaulted external debt, which has now been accomplished with United States creditors but not with the British, has been the reason for the small amount of loans to Peru. That country now has loan applications pending with the IBRD for irrigation, livestock improvement, and highway construction projects, among others, but criticizes the IBRD for slowness and charges that the bank is acting as a bill collector for the British. Peru wants and needs loans and will urge that the United States, through the Export-Import Bank, provide appropriate credit facilities.

B. TECHNICAL COOPERATION

United States technical assistance to Peru has been going on for more than 10 years, has been extremely well accepted by Peruvians, and is considered a model in its field. The principal activities and accomplishments have been in the fields of agriculture, education, and health and sanitation with both countries contributing substantially to the program. In fiscal year 1954 the United States will have spent $2,004,000 to Peru's $2,699,000, a slight increase over fiscal year 1953, during which the United States contributed some $1,624,000 to Peru's $2,300,000. The amount proposed for fiscal year 1955 is $1,769,300.

Assistance in agriculture has touched virtually every phase from experiment stations to extension services, including insect and disease control, livestock development, economic planning, engineering and soil conservation, management of machinery pools, and junior agricultural clubs similar to 4–H Clubs. Health and sanitation assistance has included programs covering all phases of public health for particular regions, countrywide programs for industrial hygiene, health education, nutrition studies, and personnel training. Assistance in the field of education covers development of a central normal school, rural nuclear schools, instructional materials, reorganization of vocational schools, and improvement of teacher education.

Other activities include a rubber development program, assistance on fisheries, geological surveys, reorganization of the mint, in-service training grants, and a vital statistics program.

1. Public health

The cooperative health program commenced its activities on July 14, 1942, at which time the Inter-American Cooperative Health *Servicio* was created to carry out a program of health improvement in the Peruvian Amazon jungle (Tingo Maria) and along the northern coast of Peru (Chimbote). This organization—called SCISP for short—was established, at the request of the Peruvian Government, by a cooperative agreement entered into between the Institute of Inter-American Affairs (IIAA), representing the Government of the United

States, and the Ministry of Public Health, representing the Republic of Peru. The original emphasis on the health and sanitation program developed by the IIAA in Peru was to install medical assistance programs and supplementary preventive medical services to workers in regions which were of strategic importance to the United States during the early years of World War II, at a time when Peru was one of the few remaining sources of important strategic materials such as quinine, rubber, rotenone, and minerals. The basic objectives behind the health program, besides providing essential health facilities to the jungle and north coast areas, were to assist Peru in improving her ability to supply those critically scarce materials and to thereby contribute to interhemispheric defense. As the years have passed, more and more emphasis has been given to the preventive medical aspects of the program and to the development of public health training facilities in the capital and in the field. It has gradually assumed the broader goal which now characterizes SCISP, that is, the development of mutually beneficial economic and political relations through cooperative action to improve health among the peoples of Peru.

Today the cooperative health and sanitation program of Peru provides medical facilities (hospitals, dispensaries, medical posts, sanitary posts), industrial hygiene, and preventive medicine to workers engaged in the production of such strategic materials as rubber, barbasco (mother product of rotenone), critical minerals and metals such as copper, lead, zinc, molybdenum, vanadium, tungsten, and others.

The activities of the SCISP since its inception are the following:

1943–44

A central office was installed in Lima for the administration of the program.

(*a*) *Construction programs.*—Medical dispensaries were at Barranca, Puerto Maldonado and Contamana with a combined population of approximately 5,000 inhabitants. Of the 4 dispensaries constructed, only 2, Contamana and Caballococha, are still being operated by the SCISP. Due to the difficulty encountered in supplying the dispensaries of Barranca and Puerto Maldonado, the SCISP decided to discontinue operation of these two units; Barranca was turned over to the military service and Puerto Maldonado to the Ministry of Public Health.

Satipo Hospital.—This hospital was constructed to assist in the colonization activities being carried on by the Government of Peru in that zone. It was in operation from 1944 to 1947, at which time it was completely destroyed by an earthquake. At the present time a medical post, operated by the SCISP, provides medical services to a population estimated to be 1,776 inhabitants.

Chimbote Hospital.—This hospital was constructed to complement an extensive program providing water supply and sewage disposal, as well as a malaria control project, which the SCISP carried out in Chimbote in the early years. Today, as the only hospital in the Province, it serves a population of approximately 36,000 inhabitants.

Tingo María Hospital.—Tingo María was the first city specifically designated for SCISP activities. The medical services dispensed by the hospital were designed to assist in the colonization project of the experimental station. Today, with a 45-bed capacity, this hospital serves a population of approximately 5,000 inhabitants.

Yurimaguas Hospital.—Situated in the fourth city of commercial importance in the jungle area, an outlet for coffee, tobacco and other jungle produce, this hospital is the only one in the Province and its services are made available to the 80,935 inhabitants of the Province.

Pucallpa Hospital.—At the time the hospital was constructed, Pucallpa, on the Ucayali River, had a population of 800. Today, with its important lumber activities, the town boasts of a population numbering 14,000 inhabitants. The medical services dispensed by the SCISP hospital have greatly aided in the growth of this jungle city.

Iquitos Hospital.—Iquitos, with a population of 55,000 inhabitants, and the most important commercial center on the upper Amazon, was sadly lacking in medical services for the preservation of health. The SCISP hospital with a capacity of 120 beds is today the core of a health program which reaches a quarter of a million inhabitants in the surrounding jungle area.

Center of Preventive Medicine—Rimac district (Lima).—This health center, in addition to supplying preventive medical services to a population of 82,346 inhabitants in the Rimac District of Lima, is also the training center for public health nurses and sanitary inspectors.

(*b*) *Other programs—Iquitos Health Center.*—During this period, in addition to the construction work and in order to complement the curative services dispensed by the Iquitos Hospital, a health center was established in Iquitos, in rented quarters, to assist in the control of diseases native to that region.

Dispensary launches.—Two launches were purchased by the SCISP and placed in service to carry the medical services to the many communities along the Amazon River. These launches have not functioned during the last 2 years for lack of repair parts. They are now being repaired and will soon be ready for service.

1945–46

Tarapoto Hospital (Department of San Martin).—This hospital—perhaps the only one in the world built entirely of mahogany—serves a population of 50,000 inhabitants in one of the outlying zones of the jungle area.

1947–48

Health education.—A project agreement was signed to lend technical and financial assistance to the health education program of the Ministry. The program, now quite extensive, is administratively under the SCISP and operates entirely on SCISP funds.

Sanitary units in Iquitos.—Although only 171 sanitary units were constructed, this project helped to demonstrate their value and encourage their use by the people. The work also demonstrated that the units could be constructed from local materials at a low cost. The construction of sanitary units continues to be one of the important educational programs of the department of sanitary engineering in Iquitos.

(*c*) *Industrial hygiene program—Nurses' home in Iquitos.*—During this 2 years a home for nurses was constructed. The building which joins the hospital not only provides living quarters for the nurses but also provides classrooms for training of auxiliary nurses, which has contributed to the raising of morale of the nurses and has facilitated

recruitment for staffing this important hospital in the jungle area of the upper Amazon Basin.

Medical post in Requena (Department of Loreto).—This medical post, under the jurisdiction of the Iquitos departmental office, functioned successfully until 1951, at which time the building which housed it was destroyed by floods, causing medical services to be temporarily suspended. At the present time the SCISP is constructing a small hospital which will be put into operation late in 1953.

Medical posts in Moyobamba, Lamas, Juanjui, Rioja and Saposoa.—These 5 medical posts in the Department of San Martín, each with its own doctor, are serving an area with a population of approximately 38,500 inhabitants.

Children's dispensaries in Iquitos.—Two dispensaries were installed in Iquitos for the care of sick children. They are located in either end of the city for more effective service.

Pathological survey program, Amazon area.—This program was carried out in collaboration with the Ministry of Public Health and the Lima Medical School of San Marcos University. The program has been discontinued.

Chimbote health center.—Working in close cooperation with the SCISP hospital in Chimbote, this health center helps to provide complete curative and preventive medical services to the rapidly growing city of Chimbote.

Yellow-fever department in Iquitos.—At the request of the Ministry of Public Health, the SCISP took charge of the yellow fever services in the Department of Loreto. The service was integrated into the departmental program to provide a better coordination of public-health activities in the department.

Tingo María health center.—This health center was installed to allow for the rapidly expanding public health program, which until now had been conducted as part of the hospital services.

(*d*) *Vital statistics.*—

1949–50

Department of nutrition.—Technical and financial assistance are given to the department by SCISP. Under this project, a new laboratory has been installed for food analyses. Surveys are being conducted to obtain data on food habits and composition of foods in Peru.

1951–52

Leprosy program in northeast Peru.—At the request of the Ministry of Public Health, the SCISP took over the administration of the San Pablo Leprosarium, and also assumed responsibility for carrying out an intensive antileprosy campaign in the Departments of Loreto and San Martin. A definite improvement has been achieved at the leprosarium, both in the physical aspects of the buildings, which have undergone some repair, as well as in the administration. Some new construction is also underway. Plans are being made for an intensive antileprosy campaign.

1952–53

Environmental sanitation.—At the request of the Ministry of Public Health, the SCISP is initiating a program of environmental sanitation, including water-supply and sewage-disposal systems in areas where several hospitals and health centers have been established. Already a project agreement has been signed wherein a public-health laboratory will be installed in Iquitos to provide laboratory services for environmental sanitation and public-health work within the entire Department of Loreto.

(*e*) *Social service—Architecture and housing.*—During the past year an architect-engineer was added to this field party and technical assistance in the field is being given to the ministry in such projects as health centers, schools, and housing areas as specifically related community development.

Consultants from technical pool in Lima.—The services of HAA technical consultants have been made available to SCISP to give advice in the development of specific programs. Many of these technical consultants, who are assigned directly from the Washington, D. C. offices, have made their headquarters in Lima since it is more centrally located for travel to other South American countries. Therefore, this has permitted them to provide more services to Peru than to other countries. These services are particularly available in the fields of epidemiology, industrial hygiene, and industrial hygiene information.

Fellowships.—Since 1942 the Institute of Inter-American Affairs has adopted the policy of granting fellowships in the United States to selected physicians, nurses, and engineers of the Latin American Republics. Sixty-eight fellows from Peru have completed training at various professional schools in the United States and have returned to assume important posts in SCISP units or with other governmental agencies. It is interesting to note that out of 36 physicians who received this training, only 4 may be said to have been lost to the various public-health programs. Of the 18 engineers, all are working for the Peruvian Government. Of the 6 nurses, only 1 has dropped out of the program, and out of 8 specialists in other fields, 3 have gone into different pursuits.

(*f*) *Industrial hygiene program.*—A program of industrial hygiene was developed in 1948 which is today serving the high mining area of central Peru, reaching probably 65 percent of the Peruvian miners. The department is supported entirely by funds from the Peruvian Government and is administered by the SCISP. Up to the present time medical and engineering studies have been made in 80 mining industries, and recommendations have been offered for the control of hazards to health and safety. The doctors of the department, which now has a branch health center in La Oroya, have examined over 6,000 workers in the course of these studies. The medical staff has also examined another 3,000 workers who were claiming compensation for occupational diseases. This group of examinations is a service rendered to the labor courts that are adjudicating claims. The department's laboratory has accepted chemists from Chile, Colombia, and Brazil for training in industrial hygiene techniques, and thus has contributed to the development of programs in those countries. Industries in Peru are seeking the advice and assistance

of the department in the control of hazards. Labor unions are asking the department to send in teams to evaluate the working environment and are asking for lectures and motion pictures on health.

(g) Vital, health, and related demographic statistics.—The overall purpose of technical assistance to Peru since 1948 in the field of vital, health, and related demographic statistics is to assist in the improvement of the collection, processing, and analysis of these classes of statistics. For this purpose, two technicians have been assigned from the Office of National Statistics, Public Health Service, Department of Health, Education, and Welfare, under the administrative direction of IIAA. One statistician employed by IIAA also assists in this work as well as collects and processes all statistical work for SCISP medical installations.

In order to implement the above-stated purpose, many projects and activities have been employed. Continuing projects include, among others, assistance in an experimental birth and death registration project in Ica; assistance to the newly created National Committee on Vital and Health Statistics; an experimental population, health and housing census in Huacho; the study and making of recommendations to the various governmental offices involved in the collection of vital, health, and demographic statistics; and the introduction of a new standardized death certificate in four Peruvian cities.

The object of improving the collection of vital, health, and related demographic statistics is for the better planning of health facilities, economic development, and other institutional development. With complete and accurate statistics, events can more adequately be predicted and hence controlled.

(h) Social service.—A welfare consultant was sent to Peru in May 1952, in response to a request from the Peruvian Government for technical assistance with a community organization course to be taught at the school of social service. The course, taught to 2 distinct groups and lasting 4 months, was given to the senior class and to a postgraduate group composed of social workers, teachers, engineers, doctors, lawyers, volunteer workers, and priests. The studies made as a result of the fieldwork assignment revealed conditions which both the school and some of the students wish to follow up. The Ministry of Public Health and Welfare has requested that a study of the seven welfare agencies within the Ministry be made by the consultant with a view to a reorganization of these services and administrations.

2. Food production

In May of 1943, the IIAA and the Peruvian Ministry of Agriculture signed a cooperative agreement to provide for the creation of the Servicio Cooperativo Interamericano de Producción de Almentos (SCIPA), the Cooperative Food Production Service. In the same manner as with the Health and Sanitation *Servicio*, funds and technicians were pooled to create a pioneering development and agricultural servicing program to the end that Peru might attain increased self-sufficiency in food production. It was devised to meet the emergency demands of war and inadequate transportation service by sea, and to fill the requirements of Peru's rapidly increasing population. SCIPA has also assumed a broader purpose by setting up a permanent agricultural extension service to provide facilities and technical advice to the farmers.

The results of SCIPA's work will be better appreciated if it is considered that Peru's population has maintained a rate of increase above normal natural increase, because of improved education and health practices.

According to data published in official reports of the Ministry of Agriculture, Peruvian agriculturists have increased the yield of food crops since 1944. This has made it possible to face the demand of more than 1,250,000 new inhabitants born since 1940, without having to increase the importation of food from abroad. About 7 percent more land has been brought into production.

SCIPA has developed an administrative and economic development program in agriculture that today reaches and serves an estimated 1,500,000 farm people directly through 37 agricultural extension offices, 22 machinery operation centers, and 3 demonstration farm centers outside of Lima, and indirectly affects most of Peru's population.

SCIPA's principal projects include:

a. A countrywide Agricultural Extension Service with 37 rural offices—140 Peruvian technical and clerical employees functioning in direct cooperation with 353 area advisory committees with an organized membership touching 1,500,000 rural people. Advisers in agriculture, home economics, nutrition, boys' and girls' club work, and specialized agricultural sciences make up this project organization. A well-organized technical information service does much to increase the coverage of this service.

b. An economic research and planning advisory department that makes cost-of-production studies, farm management analyses, crop and market reports, area economic studies, and so forth, to provide background for sound planning, has provided the most adequate economic material available on Peru's agricultural economy.

c. A rural engineering department has provided technical aid in soil conservation and land rehabilitation works, in developing irrigation and drainage projects, in studying well development, and in well drilling, in the designing and construction of rural farm and community buildings, and so forth.

d. A project to provide essential agricultural facilities to farmers at reasonable cost by using a revolving fund that operates farm equipment for contract hire on farms whose owners are unable to capitalize the ownership of essential modern equipment. About 23,000 hectares of land had been cultivated by the machinery pools during 70,000 hours of work for Peruvian farm owners in 1952; 30,000 hours of work with special machinery for land moving were necessary in leveling and draining. These figures added to previous years give 98,801 hectares cultivated and 350,209 hours of work in cultivation, harrowing, leveling, and so forth.

SCIPA operates for the account of the Ministry of Agriculture two rice mills which belong to the Peruvian Government. In 1952 they milled 4,000 tons of rice for a considerable number of small-farm operators in zones designated by the Ministry of Agriculture, such as at Tumbes, where there are no other mills, and Camana where help is given to small producers.

SCIPA provides pure-bred animals (between 1947 and 1949, 80,000 baby chicks were brought by airplane from the United States; more

than 1,000 head of selected breeding cattle for the farms of SCIPA, the Ministry of Agriculture and private farmers), improved seeds, insecticides, and fungicides at moderate prices in those regions and to those farmers who cannot get these articles through normal commercial channels and until the latter are established.

e. SCIPA conducts area demonstration farms under special agreements with the Peruvian Ministry of Agriculture which is interested in pioneering and colonizing:

At Neshuya, in the Amazon Basin, a pioneer development of 17,290 acres for cattle on Granja San Jorge, of which 573 acres have been cleared and cultivated with imported pasture grasses and corn. The zebu or Brahman cattle, brought from the United States (Florida and Texas), and the "criollo" cattle are now in the preliminary stage of production.

At Tarapoto, on the Granja Porvenir, 622 acres in general farm and livestock, of which 400 acres are in production.

At Cajamarca, on the Granja Porcón, 34,580 acres in a high altitude sheep farm, in order to produce meat and wool utilizing the "jalcas" or "punas" (grasslands or rangelands at altitudes ranging from 9,000 up to 13,000 feet) to show the best way to make use of the "punas" through modern methods.

f. SCIPA carries out a variety of short-term emergency operations to supplement the activity of other agencies of the Peruvian Government or to meet emergency conditions.

SCIPA's program directly administered more than 700,000 dollars worth of public facilities (3 livestock quarantine stations, 6 public warehouses, 3 laboratories at experimental stations, 4 demonstration farms—1 with a school—a fish distribution and cold storage plant for Greater Lima, and a technical control laboratory are to be counted among these expenditures).

SCIPA has 1,095 boys and girls enrolled in 62 juvenile agricultural clubs in order to encourage them to be good farmers in the future.

SCIPA has provided much development and assistance to the fishing industry since 1943, and takes a great deal of credit for the increase in potato production, for technical aid that has made possible sufficient production of tomatoes and citrus fruits to meet consumption requirements, and for countrywide production and use of garden vegetables.

An important aspect of SCIPA's activities has been the stimulation of private investment. A few examples may be cited:

a. As a result of SCIPA pioneering in the use of insecticides and fungicides, the demand for these items has increased to the point where two United States firms have installed mixing plants. An Argentine firm is now building an insecticide and fungicide mixing plant. Commercial firms in every important agricultural center in Peru now sell such chemicals where none was formerly available. SCIPA created the market and encouraged private business to supply it.

b. SCIPA began to develop underground water on Peru's arid coast. Soon private interests saw there could be profits in well drilling and now two companies (one is United States owned) are operating in this field. SCIPA is gradually withdrawing from well-drilling activities, in order to let private industry carry on, in the same way as it has withdrawn from the free distribution of victory garden seeds, once the Peruvians themselves saw the advantages in home gardens and were willing to buy seeds.

c. When the jungle cattle ranch project was started in 1950, there were fewer than 200 head of cattle in the vicinity of the ranch. Now there are 5 or 6 times that many, excluding those brought in to stock the ranch. While this total is not impressive, it indicates that private industry is following SCIPA's lead. Also, to pasture this number of cattle, farmers had to clear and plant nearly 2,000 acres of jungle land, a formidable task in itself.

In August 1952, the Peruvian Government received a loan of US$1,300,000 (20 million soles) from the International Bank for Reconstruction and Development to enlarge its facilities in agricultural mechanization and to intensify the work in the "pools" with heavy machinery, which the agriculturists cannot afford to buy. The Peruvian Government has entrusted the administration of this loan to SCIPA. The term of the loan is 7 years. This loan, the request for which was prepared by SCIPA, was received by the Peruvian Government through the Ministries of Agriculture, Finance, and Commerce. The Peruvian Embassy in Washington, D. C., was in charge of the business transaction.

3. Fisheries consultative services

The fisheries mission from the United States Department of the Interior acts as an advisory, surveying, planning, and training group. It does not initiate programs nor does it carry them out. Its function is to enable the Ministry of Agriculture's Directorate of Fish and Wildlife to plan and carry out as efficiently as possible the conservation of aquatic and wildlife resources as provided for in the budget of the Ministry. Members of the United States mission are assigned to work directly with their counterparts in the Peruvian Directorate of Fish and Wildlife; their offices are integrated with directorate offices; and travel is invariably with directorate personnel.

Although SCIPA contributed in 1943–44 to build a small fishing fleet for the Ministry of Agriculture, the consultative services of the United States Fish and Wildlife Service should be considered as actually starting in May 1949. The United States mission ever since has given assistance in the following projects:

The organization of a Directorate of Fisheries and Wildlife along the lines of the United States Fish and Wildlife Service.

The publication of a quarterly bulletin, in Spanish, presenting official statistics and reports.

A survey of the fresh waters of Peru, with recommendations for their development.

The introduction of brook trout to populate small lakes and streams which do not contain fish.

The building of a technological laboratory in Callao and the training of its personnel in methods of examination and analysis of fishery products.

The training of fishery biologists in methods of fishery research and in the preparation of collections of Peruvian aquatic animals.

The planning of the wholesale fishery terminal constructed under the supervision of SCIPA engineers for the distribution of fishery products in the greater Lima area (population 1,000,000).

The planning of a 75-foot fishery research vessel being constructed under the supervision of SCIPA engineers for the Directorate of Fish and Wildlife.

4. Agricultural experimentation program

The need for technical assistance in agricultural research in Peru arises from the fact that populations of the coastal cities are growing rapidly as industrialization increases. Concentrations of population in the vicinity of the mines in the sierra increase the food problems in mining areas. Because these concentrations of population entice labor now employed in agriculture, technical practices leading to increased unit production must be adopted rapidly.

On April 21, 1952, a contract was signed by the Peruvian Minister of Agriculture and the Technical Cooperation Administration represented by the Institute of Inter-American Affairs. The fundamental objective was to create the Cooperative Agricultural Experimentation Program (PCEA) to improve the quality and uniformity of production. This program is an integral part of overall agricultural operations in Peru investigating the possibilities of opening new lands to cultivation, particularly in the Amazon region, and providing SCIPA (Servicio Cooperativio Interamericano de Produccion de Almentos) extension service agents with the results of agricultural investigations for direct presentation to producers. The PCEA prepares for publication such agricultural and animal husbandry material as is applicable for distribution by the Peruvian rural extension service.

Technical cooperation programs between the United States and Peru were pioneered by the signing of contracts by the Office of Foreign Agricultural Relations, United States Department of Agriculture, and the Peruvian Ministry of Agriculture in April of 1942. This first contract provided for the establishment of the cooperative experimental station at Tingo Maria, whose results of research work in agriculture during the past 10 years have reached most of the remote areas of the Peruvian jungle and indirectly touched the activities of perhaps one-half of the area's population.

An amendment to the Peruvian-United States Agricultural Research Agreement, providing for greater emphasis on production of beef and fiber in the jungle area and research to develop rust-resistant wheat varieties and increased potato production in the coastal and sierra regions, has been approved recently.

The Lima Administrative Office operates as the central control point for programing, accounting, purchasing, and so forth, for the Tingo María, La Molina, and all other experimental-station projects, maintaining close liaison with the Peruvian Ministry of Agriculture, SCIPA, and other agricultural agencies for overall coordination and cooperation on projects.

Operating funds from all sources, that is, Peruvian Government, United States Government, private sources, and reimbursable receipts, are channeled through the Lima office for accounting and distribution. The PCEA office tries to maintain a small reserve for emergency research studies. A total of about $335,000 was expended during 1952, of which Peru contributes about $2 for each United States dollar.

Peruvian trainees have been given specialized on-the-job training as technicians; some have been sent to the United States for more advanced training.

(*a*) *Tingo María Experiment Station.*—The Tingo María Cooperative Experiment Station has completed more than 10 years of intensive

work and technical cooperation by Peruvian and United States technicians. Beginning with the heavy jungle—in an area having more than 100 inches of rainfall per annum—one will now find 625 acres of productive experimental land, a modern and complete experimental plant including administration buildings, one of the most complete chemical agricultural laboratories in South America, dwellings for some 60 technicians and skilled laborers, machine shops, a sawmill, etc.

United States technicians provided the leadership in developing a pioneer colonization area of a few hundred poverty-stricken persons in 1942 into a thriving community of more than 20,000 self-sustaining people in 1952.

During World War II valuable experimental research work in sorely needed rubber was begun. It has contributed much toward making Peru self-sufficient in rubber today. Work in rotenone production aided in the development of a soluble rotenone concentrate from barbasco, which is now used commercially.

Many species of selected industrial complementary crops were introduced, tested, selected, and distributed, such as rubber clones, oil palms, teakwood, rotenone-producing plants, and so forth, and of food crops such as improved bananas, citrus fruits, corn, soybeans, sorghum, and so forth, which are now in general use throughout the Peruvian jungle and "montaña."

Plans of extensive kenaf planting in the Tingo María region are progressing rapidly due to the stimulus of commercial interest created by the possibilities offered by the kenaf ribboning machine developed at the station.

The experimental station's program to develop jungle livestock is being expanded in line with the January amendment to the basic Peruvian-United States Agricultural Research Agreement calling for increased beef production. Forty head of zebu cows and eight bulls, purchased in Brazil and shipped to Peru, were recently trucked to Tingo María.

(*b*) *La Molina Experiment Station.*—La Molina Experiment Station was incorporated with the PCEA activities through the signing of the new joint agreement April 21, 1952. Use of the facilities offered at La Molina permits the research programs to be broadened to cover sierra and coastal region agricultural problems which, with the jungle "montaña" research at Tingo María Station, will eventually encompass research activities in all of Peru.

The Peruvian National Center of Agricultural Investigation and Experimentation, popularly known as La Molina, was established in 1927. Located 7 miles from Lima in the fertile Rimac Valley, it has soil, water, and climate representative of the coastal region, with ample facilities.

In the cooperative agricultural research program there during 1953 principal emphasis was in the training of Peruvian scientists in the production of such crops as potatoes, wheat, rice, and vegetables, with the improved use of water in irrigation, management of soils, insect and disease control, and related problems.

Wheat experimentation will be greatly expedited by utilizing the different growing seasons of the sierra and coastal regions which are the reverse of one another. A breeding program of seed potatoes is in progress and the La Molina Station has a collection of species and

varieties resistant to late blight infection and numerous crosses have been made.

The most important phases of the program for the next year or two will be improvements in wheat and potatoes, as provided by the amendment in January of the agricultural research agreement.

(c) *Rubber cultivation development.*—The Bureau of Plant Industry of the United States Department of Agriculture has maintained a specialized agricultural technician in Tingo María since 1943 to study the jungle lands of the upper Amazon with the object of expanding the cultivation of rubber in Peru. Although the work is centralized in the agricultural experimental station at Tingo María, development is also being carried out in Yurac, Yurimaguas, and Iberia on three of the former plantations of the old Peruvian Amazon Corporation.

Successful progress has been made in the discovery of a number of wild varieties resistant to leaf rot. Seeds from these specimens have been collected to develop high yield rubber trees. Control of the diseases which attack the plants is also being studied. The organization at Tingo María is also the only source of high yielding, disease resistant clones for planting in small areas by the colonists of the region.

Research is now underway to determine the cause and extent of root damage in the Yurac plantation. The object is to discover if the cause is mechanical, due to a high water level or burning by the sun, or if the origin is pathological. Harvesting of rubber from the resistant varieties has been started recently.

5. Education

The cooperation of the United States in the field of public education in Peru under the technical cooperation program has been developed through the Servico Cooperativo Peruano Norteamericano de Educación (SECPANE), an organization which was established in April 1944.

Following the same policy established in the other *servicios*, SECPANE has offered its collaboration to those programs specifically requested by the Ministry of Public Education, with whose officers it has kept a very close and cordial relation in each of the numerous projects jointly developed, or under development, at present in Peru.

It has been especially active in the fields of vocational education and rural education where most of the emphasis of cooperative work has been given, but SECPANE also continued developing other programs related to the other fields and degrees of Peruvian public schools.

In vocational education the servicio cooperated in the planning and installation of shops, in the acquisition and management of new equipment, in the realization of summer courses for the training of directors, teaching, and administrative staffs of those schools. Its specialists, working together with the Peruvian Director of Technical Education, have participated in the administrative reorganization of the same, as well as in the elaboration of the new teaching plans and programs. This contribution, added to the particular impulse given to technical education by the Peruvian Government, has resulted in the installation of numerous industrial schools and an increase in the number of students attending them.

To meet the great need of teachers for the different shop specialities, there has been established in temporary quarters at the "Gran Unidad

Escolar Melitón Carvajal", the technical education division of the Central Normal School, under the direction of the IIAA specialists and the SECPANE personnel. They are preparing 42 teachers in 6 different specialties who, at the end of their studies, will receive the degree of industrial teachers for secondary education.

In rural education the servicio has participated, through its technicians, Peruvians and Americans, in the installation and development of the nuclear school program which was originally organized in the Departments of Puno and Cuzco, and afterward enlarged to include various departments of the sierra of the country.

The program of nuclear schools has the capacity of incorporating in rural education the characteristics of the functional school. In addition to the subjects included in the common education curriculum, they offer elementary work in agricultural techniques, health, and hygiene. In the beginning there were 16 nuclear school zones which included 320 schools, 450 teachers, and 32,000 students. In 1951 the number of school zones was increased to 20; and in 1952 it reached 34. Recent changes have tended to standardize all rural zones of the country in accordance with the provisions of the national plan of education.

The authorities of the Ministry of Education, as well as the directive staff of the SECPANE, have recognized that in order to make this work more effective they need to face what probably is the major problem in the education of the country, viz., the preparation of teachers with enough training to meet the increasing needs of the schools operating at present. For this purpose it was resolved to establish in "La Cantu ta," Chosica (20 miles east of Lima), on more than 42 hectares of land, the Central Normal School which opened in 1953, and which will house from 600 to 800 students.

These students will have the best material facilities available as well as the most convenient cultural and professional surroundings, for which new plans and work systems are being prepared under the direction of the Ministry and the advice of the SECPANE.

For this same purpose work was recently started on organization and construction of the Escuela Normal Rural de Urubamba, in which about 100 students will receive preparation to teach in the rural schools of the country. This school, as the previous one, was organized by, and has the technical, economic, and administrative assistance of SECPANE.

Besides this, the servicio has had the opportunity to cooperate with other public offices, as well as with the teachers and cultural organizations, by developing English courses for teachers in the capital and in other cities of the country. Some of these courses are: Visual aids program for the personnel of common and technical education schools, normal schools, home economics courses for teachers of the womens' technical and secondary schools, incorporation of new courses on vocational subjects, such as automechanics, plumbing installations, and cosmetology, and summer courses for teacher training. Also, for the purpose of teacher training, the SECPANE has sponsored scholarships to study abroad for a large number of Peruvian teachers, the majority of whom will teach in the normal schools of Chosica and Urubmaba when they return to their country.

6. Other technical cooperation activities

(*a*) *Geological Survey Mission.*—In 1945 a mission for research and geological investigation was sent to Peru by the United States Department of the Interior. At the beginning the technical help was requested by the Banco Minero del Peru under the auspices of the Interdepartmental Committee on Scientific Cooperation, United States Department of State. The first study was made on the mercury deposits of Huancabelica. At present the mission is making a general study and evaluation of the resources of lead and zinc in cooperation with the Instituto Geológico del Perú. A systematic research of the lead and zinc deposits of Ancash, Cajamarca and La Libertad has been underway since 1947.

An important function of the Geological Survey Mission is the training of young geologists from the Peruvian School of Engineering and from San Marcos University for a period of 2 years. This training is completed with postgraduate studies in the United States under technical cooperation grants.

The Geological Survey is supplying up-to-date knowledge on certain strategic minerals as well as providing the mining industry of both Peru and the United States with the available geological information.

(*b*) *Civil Aviation Mission.*—From 1946 through 1951 a civil aviation mission from the Civil Aeronautics Administration, United States Department of Commerce, was in charge of reorganizing the civil aviation administration in Peru. The mission helped to prepare a civil aviation code, to establish safety rules, airport operation patterns and the traffic control, communications, navigation and meteorology services at airports used by United States flag carriers as well as at other airports throughout the country. At the same time the mission trained technical and administrative personnel, aided in building radio and meteorology stations, and contributed with technical help to build major airports at Cusco, Talara, Tacna and Pucallpa, and to install the necessary facilities for air travel to the interior of Peru.

(*c*) *School of Social Service.*—Since 1941 the Children's Bureau, United States Department of Health, Education, and Welfare, has helped the Peru School of Social Service to obtain scholarships in the United States for Peruvian social workers. The International Division of the Children's Bureau was active in helping to obtain scholarships at the Universities of Fordham, Columbia (New York) and Notre Dame of the Lake (San Antonio, Tex.). Social workers, including the director of the Peruvian School of Social Service, were given opportunities to visit and observe the work of the Children's Bureau.

In 1946, with the cooperation of the Peruvian Ministry of Public Health and SCISP, the School of Social Service established its first office at the Rimac Public Health Center. That same year a specialist from the Children's Bureau offered postgraduate courses on casework methods at the Peru School, and again in 1949 the same American specialist taught supervision in social casework practices. In 1951 another specialist of the International Division was invited, at the request of the Ministry of Public Health, to teach undergraduates and postgraduates at the same School of Social Service. At present there is another social service consultant working in Peru under SCISP's

coordinated activities with the Department of Health, Education, and Welfare.

(*d*) *Geodetic Survey Mission.*—The mission sent by the United States Coast and Geodetic Survey has been considered also as a technical cooperation activity although the party has been established and has developed its functions in connection with the Peruvian Army. Scholarships have been provided to Peruvian officers in the United States.

(*e*) *Bureau of the Mint.*—From August through November 1951, a high official and a technical adviser of the United States Bureau of the Mint, United States Department of the Treasury, came to Peru to prepare a survey and a report on reorganization and modernization of the Peruvian Mint Office (Casa Nacional de Moneda) at the request of the Ministry of Finance and Commerce.

(*f*) *Training program.*—The United States Government has for many years invited outstanding people to the United States for purposes of travel and study, to familiarize them with United States administration of modern technology or to teach them a special skill. This practice became formalized in 1942 when the Civil Aeronautics Administration (CAA) of the United States Department of Commerce instituted its Foreign Nationals Training Division to plan and execute an orderly training program in all phases of civil aeronautics, from piloting and mechanics to airport management. Since that time other Departments of the United States Government have followed CAA's lead and have set up similar training divisions. Both the Department of Health, Education, and Welfare and the Department of Agriculture have engaged in training activities for foreigners for a number of years. Most of the other Departments have devised in-training systems that train both United States citizens and foreign nationals who are employed by either administration.

When the Act for International Development was passed by the United States Congress in June 1950, training was one of the cornerstones of the proposed program. Dr. H. G. Bennett, first Director of the Technical Cooperation Administration, believed that point 4 was in reality a giant educational project and that the in-training programs of the different departments, and university instruction, should become a major activity of the American self-help plan.

Since the inauguration of technical cooperation activities in Peru larger and larger numbers of Peruvians have been going to the United States for training and observation. During the year ending June 30, 1952, Peru ranked third in the world for number of trainees approved for training grants. The following figures indicate the number and specialities of these trainees for both fiscal years 1952 and 1953.

	Fiscal year 1952	Fiscal year 1953	Fiscal year 1954 [1]
Agriculture	12	10	22
Engineering	3	1	
Public administration	6	9	14
Road engineering	3		
Mapping and Geodesy	5	1	
Education	23	8	
Health and social service	11	12	20
Civil aeronautics	3		
Labor practices	1	1	
Fisheries	1		
Geology	1	1	
Total	69	43	56

[1] A request has also been made in the following fields for fiscal year 1954: Transportation 15; industry and mining 23; and housing 3. These bring the requests to a total of 97.

The objectives of the training program are to complement the overall objectives of TCA–IIAA in Peru. Candidates are chosen because of the relationship of their present work to existing or proposed projects, and in some cases, in order to provide a corps of trained personnel who can be drawn on for future programs as in the case of the 23 trainees in education who are returning to Peru to teach more teachers. The training received must be used for the general benefit of the whole country. It is not provided to advance an individual's prestige or earning power.

Training, as viewed by the leaders of TCA–IIAA in Peru, is a very worthwhile and necessary part of United States and Peruvian cooperation, but it must always be related to the program as a whole, to expand and contract as the necessities of the program indicate.

Technical cooperation in agricultural experimentation program, Peru

	United States funds	Peruvian funds	Other funds	United States personnel	Peruvian personnel
Calendar year—					
1942	$45,000	$15,000.00			6
1943	95,000	350,000.00		5	13
1944	115,000	400,000.00		7	80
1945	100,000	300,000.00		10	113
1946	85,000	275,000.00		8	105
1947	90,000	275,000.00		7	132
1948	105,000	250,000.00		7	101
1949	85,000	250,000.00		5	47
1950	72,000	250,000.00		5	82
1951	130,000	250,000.00		5	60
1952	110,000	229,956.30		6	470
1953	110,000	222,509.42		8	481
1954	110,000	242,659.73		9	500

Technical cooperation in agricultural development, Peru

Year	United States funds	Peruvian funds	Other funds	United States personnel	Peruvian personnel
1942				1	
May 19, 1943, to May 30, 1953	$162,977	$192,109		18	57
June 1, 1944, to Aug. 31, 1944	150,000	400,578		16	113
Sept. 1, 1945, to Dec. 31, 1946	75,000	400,925		10	133
				13	172
Jan. 1, 1947, to June 30, 1948	75,000	723,987		11	214
				15	231
1949	101,980	556,346		16	157
Fiscal year 1950	150,000	1,097,547		21	254
July 1, 1950, to Dec. 31, 1951	511,000	696,763		19	349
1952	230,000	441,204		20	289
1953	200,000	435,740		18	247
1954	200,000	400,000		20	250
Proposed, fiscal year 1955	[1] 777,000				

[1] This includes agriculture and natural resources.

Technical cooperation in education, Peru

	United States funds	Peruvian funds [1]	Other funds	United States personnel	Peruvian personnel
Calendar year—					
1942	[2]				
1943	[2]				
1944	[2]			1	
1945	[2]			6	12
1946	[2]			8	15
1947	[2]			7	18
1948	$41,700	$281,617.68		11	20
1949	40,000	231,398.46		12	71
1950	50,000	301,749.63		18	54
1951	100,000	260,911.51		14	66
1952	[3] 190,000	[4] 391,367.37		10	70
1953	[3] 210,000	[5] 631,367.21		8	97
1954	150,000	391,367.27		11	97
Proposed, fiscal year 1955	323,800				

[1] In addition to contributions to joint program funds and expenditures made by the Peruvian Government under formal agreements, the Ministry of Education has expended during recent years over $500,000 above original pledge in furthering the objectives of the servicio program.

[2] Agreement covering period July 1, 1947, through June 30, 1949, was the first arrangement to follow the United States fiscal year. Contributions from first agreement of Apr. 4, 1944, through June 30, 1948, are totaled following fiscal year 1948.

[3] Additional contribution of $40,000 by United States included here matched by Peruvian Government's committment to expend $333,333.33 for Central Normal School program.

[4] Expenditures by Ministry of Education not included. (See note 2.)

[5] Includes $60,000 additional contribution by United States and $240,000 expended by the Peruvian Government in accordance with supplemental agreement of Mar. 28, 1953.

Technical cooperation in health and sanitation, Peru

	United States funds	Peruvian funds	Other funds	United States personnel	Peruvian personnel
Calendar year—					
1942	$300,000.00	$4,626.06		6	[1]
1943	475,000.00	24,626.98		22	[1]
1944	779,956.38	185,311.01		20	[1]
1945	169,137.63	240,000.00		16	[1]
1946	61,112.20	270,890.10	$1,476.92	12	[1]
1947	89,128.10	479,922.72	2,772.37	9	470
1948	73,856.23	600,941.12	627.14	10	548
1949	94,323.78	905,155.58	798.70	9	587
1950	77,485.67	432,341.14	3,429.51	10	615
1951	125,000.00	631,502.85	804.74	9	630
1952	145,000.00	895,384.27	11,233.66	11	705
1953	145,000.00	896,489.82	186,024.26	16	750
1954	145,000.00	699,676.72	23,333.33	11	435
Proposed, fiscal year 1955	406,200.00				

[1] Not available.

XIV. BOLIVIA

On Tuesday morning, October 13, the group departed Lima for La Paz, Bolivia, and arrived in the latter capital at 1:15 p. m. on the same day, being met by United States Ambassador Edward J. Sparks and members of his staff. The mission went directly to the chancery for briefing on the complex and difficult problems which are peculiar to Bolivia's present economic situation. Recent nationalization of the tin mines, upon the dollar returns for which product Bolivia is almost completely dependent, has not created the social utopia that had so confidently been expected when the properties were seized by the Government. The price of Bolivian tin ore has dropped in the world market, and only the conclusion of an agreement with the United States for the purchase by the United States of 10,000 tons of ore for delivery by March 31, 1954, prevented a serious economic hiatus some months ago.

A. BACKGROUND

Bolivia has an area of 416,040 square miles and a population of 3½ million, of whom 320,000 live in the capital city of La Paz. Most of the country is in the high Andean range, and the airport at La Paz, altitude 12,500 feet, is the highest commercial field in the world. The population of Bolivia leads a precarious existence in their chill and mountainous land, where the slighest exertion by a newcomer unaccustomed to the rarified atmosphere is reflected by difficulty in breathing and general physical depression. Bolivia is in no manner self-sufficient. Half of the population is engaged in subsistence agriculture, while the other half must seek work in the mines or elsewhere in the country's meager industrial structure. Foodstuffs in vast quantities must be imported from abroad, and famine is never too far from the mass of Bolivia's people.

Last November the situation became so serious that in order to avert widespread hunger and political dissatisfaction which inevitably accompanys economic distress, the United States Government provided the Bolivian Government with emergency credits in the amount of $9 million.

One of the basic deterrents to the establishment and development of a sound Bolivian economy has been the almost total lack of physical communications between the various sections of the country. The population of Bolivia lives in large part on the altiplano or Andean plateau many thousands of feet above the oriente lowlands, where tremendous expansion of agriculture is possible, providing communications can be established.

B. HIGHWAY CONSTRUCTION

As a step toward opening up the lowlands area to commerce and trade with the highlands, the Export-Import Bank (in the period from 1942 to 1953) loaned Bolivia a total of $28.7 million for the construction of the Cochabamba-Santa Cruz Highway.

Inasmuch as the highway project is one of the major efforts of its kind in the hemisphere, the study mission was anxious to see the construction work as the project neared completion. Through the cooperation of the United States air mission to Bolivia, the group was flown from La Paz to Comarapa, a small village midway between Cochabamba and Santa Cruz, and site of the main construction camp operated by the contracting firm of Macco-Pan-Pacific Co. Work on the highway was commenced in May 1951, and in order to facilitate the construction effort, several camps, farms, and other needed facilities were built. American ingenuity at work was well demonstrated at Comarapa where, until the advent of the contracting company's machinery and equipment, it is doubtful if any native of the countryside had ever seen a mechanical device. Offices, mess halls, machine shops, kitchens, dormitories for Bolivian workers, individual houses for foremen and skilled technicians, all served to make Comarapa a unique institution in the middle of a country which had changed in no marked degree for a thousand years.

Bolivian engineers, trained in the United States, were working with the contractor's engineers in all phases of the construction effort. Classes in the care and maintenance of heavy road machinery and trucks were being given workmen in order that they might be qualified to assume charge of the equipment upon the completion of the contract.

As of the time of the visit to Comarapa by the study mission, only one United States truckdriver remained out of the many employed since the beginning of work. All had been progressively replaced by Bolivian nationals as they acquired the necessary skills. Two hundred and fifty Bolivian tractor operators had completed training, as had others in other specialized areas.

The mission observed a considerable evidence of road usage. Many loaded trucks were in transit night and day in both directions. Little evidence of new agricultural activity was observed in the immediate vicinity of Comarapa, although the study mission was told that new land was being brought into production daily in the Santa Cruz area.

For the first time in history a Bolivian in the altiplano can now receive the products of lowland Bolivia, and vice versa. From Santa Cruz come fruits, vegetables, hides, lumber, and needed foodstuffs. Returning trucks load with gasoline, oil, and manufactured goods from the larger cities on the altiplano. The highway should give new impetus to trade and commerce throughout the entire nation as laterals and connecting secondary links are added. Politically and sociologically, the highway should serve to give all Bolivians a feeling of unity and oneness heretofore unknown. If the road is maintained in serviceable condition by those whose responsibility it now is to keep it open, the highway can be a great artery of necessary trade. If it is not maintained in usable condition on a year-round basis, the millions spent for its construction will have been wasted.

C. TECHNICAL COOPERATION

Bolivia's problems are frustrating ones, and no easy solutions appear ready at hand. The poverty of the Bolivian Indian is as tragic as is that of the poor Haitian, but the latter, at least, has the warmth of the sun and some measure of nature's food gifts. The Bolivian, always oppressed by cold and hunger, has only the bleakness of the high altiplano and the destitution of much of his homeland's soil to ponder upon. Agrarian reform laws may in time solve a measure of the difficulty, but only the achievement of self-sufficiency in basic food products will ever enable Bolivia to put her economic house in order. To assist Bolivia to reach a degree of self-sufficiency, the United States has been giving technical assistance since 1942. The present program, which is budgeted at $3.3 million for fiscal year 1954 and is coordinated by the country director in the Embassy, consists of field parties in health, welfare, and housing, education, agriculture and natural resources, and civil aviation. All the field parties except that in civil aviation work through cooperative *servicios* are attached to the appropriate Bolivian Government ministry and supported by funds from both Governments. The MNR (Movimiento Nacionalista Revolucionario) regime appears to be singularly appreciative of the advantages of United States technical assistance and has had a better record in supporting the *servicios* than preceding governments.

The agricultural field party, which is the largest and the most immediately important for Bolivia's economic development, is engaged in extension work and in research at experiment stations to determine plant strains, fertilizers, planting practices, etc., best suited to the various types of Bolivian agricultural lands.

The health mission, which utilizes principally Bolivian personnel, operates clinics in nine localities, advises the Ministry of Health, assists in the planning of hospitals and water-supply systems, and engages in preventive medicine campaigns.

The education mission concentrates on vocational education, the training of teachers for rural schools, and the operation of rural school núcleos.

Technical cooperation program in agriculture, Bolivia

	United States funds	Bolivian funds	Other funds	United States personnel	Bolivian personnel
Calendar year—					
1942					
1943					
1944					
1945					
1946				1	
1947		$1,501.74		2	
1948	$50,000	21,489.11	$369,638.69	3	14
1949	25,000	75,000.00	48,602.40	4	160
1950	25,000	80,357.14	53,859.91	4	240
1951	175,000	325,000.00	58,699.98	11	232
1952	250,000	500,000.00	69,666.67	21	312
1953	137,500	476,973.68	50,442.83	22	426
1954	1,940,000	2,075,000.00		35	700
Proposed, fiscal year 1955	814,500				

Technical cooperation program in health and sanitation, Bolivia

	United States funds	Bolivian funds	Other funds	United States personnel	Bolivian personnel
Calendar year—					
1942	$1,000,000			8	13
1943	(1)			25	95
1944	(1)			13	129
1945	500,000	$1,000,000.00	$47,552.82	17	152
1946	(2)			14	194
1947	(2)			7	212
1948	100,000	504,504.50	14,414.41	7	247
1949	100,000	504,504.50	47,619.05	11	263
1950	150,000	466,666.66	50,617.73	7	239
1951	150,000	266,666.68	101,123.58	5	238
1952	175,000	684,333.33	85,451.58	8	251
1953	150,000	450,287.72	65,354.30	6	270
1954	200,000	510,000.00	100,000.00	9	300
Proposed, fiscal year 1955	346,400				

[1] The amount contributed in 1942 was sufficient to run program to 1945.
[2] The amount contributed in 1945 was sufficient to run program to 1948.

Technical cooperation program in education, Bolivia

	United States funds	Bolivian funds	Other funds	United States personnel	Bolivian personnel
Calendar year—					
1942					
1943					
1944					
1945	$143,334	$150,000.00	(1)	1	3
1946	71,666	75,000.00	(1)	4	21
1947	(2)	37,500.00	(1)	5	21
1948	25,000	75,000.00	(1)	5	24
1949	27,500	82,500.00	(1)	4	23
1950	27,500	45,787.50	(1)	5	25
1951	167,500	214,587.75	(1)	7	35
1952	75,000	75,000.00	[1] 135,564.16	10	37
1953	105,000	214,576.42	2,550.62	11	53
1954	100,000	231,578.95	2,105.26	15	83
Proposed, fiscal year 1955	282,400				

[1] Yearly contributions unknown, but figure for 1952 is the cumulative total up to 1952.
[2] Period of basic agreement ended September 1947. No provisions were made to grant money to the Servicio during second half of fiscal year 1947. Upon request of the Bolivian Government the basic agreement was extended to June 30, 1948, and provisions were made only to continue paying the education specialists of the mission in the amount of $30,000.

Technical cooperation program in civil aviation, Bolivia

	United States funds[1]	Bolivian funds	Other funds	United States personnel	Bolivian personnel
Calendar year—					
1942					
1943					
1944					
1945					
1946				1	
1947				2	1
1948				2	3
1949				2	1
1950				3	1
1951				1	1
1952				1	2
1953				2	3
1954				2	3

[1] There are no American funds contributed to the program. The only expenses have been those of technical and administrative nature.

XV. ECUADOR

On Sunday, October 17, the subcommittee study mission arrived in Quito, the capital city of the Republic of Ecuador. The group was met at the airport by Mr. Thomas J. Maleady, Chargé d'Affaires, and members of his staff, together with a delegation of members of both the Senate and the Chamber of Deputies of Ecuador.

The legislative representatives of the Republic of Quito were unusually kind in their reception of the study group and the hospitality shown the members. During the 2-day stay of the mission in Quito, the group was honored by the Committee on Foreign Affairs of the Chamber of Deputies of Ecuador at a luncheon in the Hotel Cordillera. On the same evening the Vice President of Ecuador, Senor Alfredo Chiriboga Chiriboga, who is presiding officer of the Senate, was the host at a reception tendered to the study mission by legislative representatives of both of the country's parliamentary bodies.

A. ECONOMIC HIGHLIGHTS

Ecuador encompasses an area of 104,000 square miles, approximately equal to the area of the State of Colorado, and the nation's population of 3,200,000 is engaged largely in the pursuit of agriculture.

Ecuador is primarily an agricultural country, with bananas, cacao, coffee, and rice exports supplying nearly 90 percent of total exports in 1952. Total foreign exchange receipts in 1952 amounted to $80,243,000, imports amounted to $66,987,000, leaving a favorable balance of $13,256,000. This was the second highest favorable balance in the last decade. The United States was Ecuador's No. 1 customer in 1952, as in the previous years, taking 54 percent of Ecuador's total exports. At the same time, the United States was Ecuador's No. 1 supplier, with imports from the United States accounting for 65 percent of Ecuador's total imports in 1952. With the prospect of another good crop year in 1953, the Ecuadoran economic picture is bright for the foreseeable future.

Ecuador also exports balsa wood, kapok, pharmaceutical products, tagua nuts or vegetable ivory, and Panama hats. The Panama hat industry has been declining steadily in recent years largely because of a falling off in demand for this product in the United States and other foreign markets.

Petroleum production in Ecuador is centered in the Santa Elena peninsula west of Guayaquil and amounted to 2,800,000 barrels of crude in 1952. Daily production is approximately 7,500 barrels. Two-thirds of this amount was refined and the remainder exported. Because refinery capacity is insufficient to cover the country's needs, some imports of regular gasoline and fuel oil are made to supplement domestic production, and Ecuador's total requirements for aviation gasoline are imported. One American-owned and operated company, the Manabí Exploration Co., is in the field, while the other companies

are mostly British, including the largest firm, Anglo-Ecuadorian Oilfields, Ltd.

Production of minerals is a negligible factor in the Ecuadoran economy at present although a large gold-mining operation was carried on near Portovelo, in southern Ecuador, for nearly 50 years by the American-owned South American Development Co. This company ceased operations in 1951 after high-grade ore deposits had been worked out. Sulfur, copper, coal, and manganese deposits exist in Ecuador but in commercially uneconomic quantities.

There is little manufacturing in Ecuador and no heavy industry. The textile industry in the Sierra supplies a major portion of the country's needs for cotton cloth but finer fabrics are imported, for the most part. Similarly the shoe and boot industry supplies most of the country's needs for these items. Other products manufactured in Ecuador are matches, pharmaceuticals and toiletries, soap, furniture, and cement.

The need for improving land and air communications in Ecuador is becoming more and more urgent and the Ecuadoran Government is giving priority attention to ways and means of meeting this need. The Export-Import Bank has granted a $2,700,000 loan for the construction of the Quevedo-Manta Highway in the western lowlands, in order to furnish an outlet to the sea at Manta for agricultural produce grown in the Quevedo area. The Guayas Provincial Committee on Highways and Rivers is engaged in an extensive road construction plan designed to facilitate the movement of products from the interior of that rich agricultural province to the port of Guayaquil, which is by far the most important in the Republic. East-west roads linking the highlands with the western lowlands are also being given high priority in the Government's planning.

The need for improved transportation was highlighted in March of last year when torrential rains washed out sections of the Guayaquil-Quito railway and landslides severed highway connections between these two cities. To relieve resultant shortages of food in the capital the United States Air Force operated an airlift for more than 2 weeks.

Plans are now nearing completion for the improvement of the Quito and Guayaquil airports and the Export-Import Bank is expected to provide a $4 million loan for that purpose.

Credits authorized by the Export-Import Bank to Ecuador total $28,800,000, of which $21 million have been disbursed. Projects thus financed include waterworks for Quito and Guayaquil, highway construction, earthquake reconstruction, airport improvements, railway equipment, housing construction, and sewer systems.

B. TECHNICAL COOPERATION

The Foreign Operations Administration maintains a general administrative office in Quito headed by a director of technical cooperation, a director of administrative services, a program officer and a small administrative staff of Ecuadorans.

Actual operations are conducted largely through three *servicios*, in agriculture, health, and education, which function as divisions of the respective Ecuadoran ministries concerned. The *servicios* are composed of United States and Ecuadoran personnel. For every North American technician an Ecuadoran counterpart is appointed in order

that Ecuadorans may be trained in each phase of the work. In addition, other Ecuadorans are employed as necessary to carry out the projects initiated and in these positions become better technically prepared in their respective fields. In addition to the *servicios*, technical assistance is also being provided in civil aviation, small industries (handcrafts) and railroads by a representative in each of the fields.

In 1942, an agricultural experiment station program was organized with United States assistance, with the principal purpose of exploring the possibility of producing in Ecuador many of the crops and agricultural products needed by the United States and its allies in the war effort. When this need ended, the direction of the program was changed in order to assist Ecuador in the development of its major agricultural resources, and to combat plant and animal disease and other causes of low production so that the country could assume a better economic position. Under the technical cooperation program, this agricultural research and development work was converted in 1952 into an agricultural *servicio* in order that the information obtained through research could be spread more rapidly to Ecuadoran farmers through special emphasis on extension type activities.

In 1942, public-health work was also initiated in Ecuador by the United States Government, leading to the formation in 1943 of the Servicio Cooperativo Interamericano de Salud Pública (SCISP). This *servicio* is composed of health personnel of both governments, and is jointly financed by both.

In 1945, an educational *servicio* was formed at the request of the Ecuadoran Government to provide assistance in improving standards of training in the country's rural primary and normal schools.

In addition to these three major programs, the program also includes technical assistance to the country's aviation through the services of a United States airport engineer who is furnishing technical advice in connection with Ecuador's expanding airport program; to its large Indian population through a project designed to train home-industry workers in the fields of weaving and other manual arts; to its railroads through the technical guidance of a railroad dispatcher who is aiding the Government-owned lines in improving their traffic control and management.

Ecuador's inhabitants have one of the lowest standards of living of any country in the Western Hemisphere, their average income is the lowest, their health and education levels and agricultural economy are among the poorest. Yet potentially the land is capable of producing a large volume of crops and products needed by other countries in addition to that needed for their own use; the people are willing and anxious to accept improved methods of production; and, under the technical cooperation program, the country has made marked progress, in health, education, and agriculture. This progress can be continued with a minimum of additional expenditures of United States capital in proportion to results which can be expected.

Progress which has been made to date, and continued work which has been requested or which is indicated by existing progress and problems, is reviewed below according to the various fields of activities.

1. Agriculture

The geography of Ecuador provides a great variety of agricultural problems because of its great variation in climates, soils, and crops. This variation in agricultural areas has resulted in need for research in a number of distinctly different regions, and with a large number of crops. The research conducted to date established the fact that Ecuador is capable of producing many of the fibers, essential oils, rubber, and foods products which the United States now purchases from sections of the world which are or may become under Communist influence, or from areas where transportation to the United States is time-consuming and expensive.

In the elimination of the diseases which were rapidly taking Ecuador out of the food-producing ranks, great strides have been made toward reducing the cacao diseases, and in developing disease-resistant grains. In recent years the program has included small-grain and forage-crops research in the highlands, improvement of fruits and vegetable crops, the establishment of a soil-testing laboratory, and livestock improvement. Of the thousands of wheat selections tested, approximately 15 have proved to be superior to local varieties. Those are now available in sufficient quantity for distribution to farmers. Improved plants are being distributed to Ecuadoran farmers.

The principal agricultural export crops of Ecuador which have benefited from the work of the agricultural experiment station program are cacao, bananas, coffee, and rice. In 1952 Ecuador surged to the top as the world's largest exporter of bananas, from a rather low position a few years ago. In these four principal crops, disease-control methods, improved cultural practices and, in the case of cacao, improved high-yielding varieties developed by technical cooperation, will be a direct economic benefit to the country.

Approximately 6,000 head of dairy cows are now under test, using the Dairy Herd Improvement Association testing program methods. Improved pasture and management programs have been developed for the benefit of the Ecuadoran dairymen.

A program of pyrethrum, source of an insecticide in very short world supply, has been developed by the Seirra Experimental Station, and pyrethrum is now being grown commercially by two United States firms in Ecuador. Approximately 300 acres are already under cultivation, using seed originally supplied by the *servicio*.

Over 2,000 head of livestock were sprayed during 3 months of 1952 as part of a *servicio*-sponsored demonstration program of tick and torsulo control. As a result, farmer's associations and provincial governments are organizing spraying programs for whole areas, in which the *servicio* has been asked to furnish only the technical know-how.

Potatoes in Ecuador have been one of the principal food crops. In recent years as high as 75 percent of the crop has been lost because of late blight. Recent tests made by the *servicio* prove that this disease may be controlled by the use of chemicals. Many farmers are now saving their potato crops by following the recommendations made by the *servicio*.

One of the most important features of the agricultural program is the training of Ecuadoran technicians in the field of extension service. The extension service program is operated through the Ecuadoran

Department of Agriculture, with several United States technicians assisting.

In addition to training Ecuadoran technicians in improved farming methods, the extension program is carrying to the Ecuadoran farmers the many improved products and methods developed by the Servicio.

2. Education

The Servicio Cooperative Interamericano de Educacion has concentrated its work primarily in two fields: (1) Rural vocational education, and (2) teacher training.

Needing to improve the educational level of a population more than 80 percent illiterate, the Education Servicio has found it necessary to restrict its activities to certain phases of this tremendous field of activity in order to obtain results. Even then, as is natural, the achievements are more intangible than in most other fields of point 4 activity. The ultimate objective is through better instruction of the pupils to raise the cultural, economic, and social levels of the rural communities.

Perhaps in no other field of technical assistance is the task of training Educadoran nationals greater in terms of numbers. Among the 8 normal schools where rural teachers are trained, the Servicio has most actively participated in 3. With the goal of instructing the teachers in modern teaching methods, the Education Servicio has changed the old method of teaching by "rote" through introducing practice teaching methods, providing teacher demonstrations, and training of demonstration teachers, and has prepared a revised course of studies for the normal schools.

In the past 4 years, 13 special courses were organized, which were attended by 685 rural primary teachers and by normal school teachers. This is in addition to the greater number of rural primary teachers who have been reached through in-service training.

Also, primary school teaching materials have been developed. Approximately 200 publications have been prepared by Servicio personnel for use by elementary rural teachers and by normal school teachers.

Technical assistance in education, particularly vocational training, is being provided by U. N. agencies. The programs are operating in different geographical areas to avoid duplication.

3. Health and sanitation

The improvement of the public health is essential to the economic and social development of Ecuador, a country which is suffering from malaria, yaws, tuberculosis, and other contagious diseases, as well as malnutrition. The results obtained by technical cooperation in this field are quite spectacular. In northwestern Ecuador the disease of yaws has been reduced in the past 2 years from 10,000 cases (even in an area rather sparsely populated) to 1,000 cases. It is confidently expected that the disease will be completely eradicated. Likewise, active antimalarial campaigns are reducing the incidence of this disease to a fraction of what it was formerly. In several areas malaria has been completely eradicated. A number of potential agricultural areas, now jungle, are available for development without the risks of sickness and death that formerly existed. Work remains to be done in many areas, but a national awareness now exists

relative to the hazards of public health and of the necessity for eliminating or reducing them.

Large numbers of Ecuadorans have been trained in public health and sanitation. Many recipients of training grants in the United States have returned to occupy responsible positions in the field of health and sanitation, and the results of their work are becoming more and more apparent.

One of the important programs in Ecuador has been the construction of hospital facilities for a population which was almost completely lacking them. In the past 10 years, 28 hospitals have been constructed or remodeled, located in almost every important city of Ecuador. The health servicio, for this purpose, has created a staff of Ecuadoran engineers and construction supervisors to undertake the construction according to modern standards for hospital facilities.

It has not been enough to assist in the provision of hospitals without having assurance that they will be operated in a professional manner for the welfare of the patients. For this reason, technical assistance has been provided in hospital administration and in nursing. In 1942 a national school of nursing was organized with the technical assistance of four nurses from the United States. One hundred and seventeen nurses have been graduated from this school to date. Many of these nurses have continued their training in graduate schools and returned to serve as instructors and supervisors. The school is now directed by one of its own graduates, and no North American personnel are required full time to assist in its operation. The achievements of this school of nursing and the results obtained by its graduates in promoting the health of the country are notable achievements of this point 4 activity.

As the hospitals have been completed, much of the work of the Servicio has turned to the construction of sewer and water facilities. As in the case of hospitals, very few important communities in the country have not benefited from the work of the Health Servicio in providing potable water and sewer systems. This work is expected to continue for another 3 years before completion. Following that, the principal objective in the field of health and sanitation will be the creation of local health centers. Already the training of Ecuadorans is proceeding, providing a nucleus for the larger public health staff that will be required in the years to come.

Following are some completed and current activities of the Health Servicio:

Construction, equipment, and operation of four hospitals.
Construction and equipment of six hospitals.
Construction and/or remodeling of 18 hospitals.
Construction of approximately 50 kilometers of sewers.
Construction of two health centers.
Construction of 30 separate city water-supply systems (in progress at present).
Operation of public health education program.
Operation of one health center.
Trained 125 sanitary inspectors in 5 separate courses.
Operation of two laboratory training courses of 1 year each.
Trained 150 nurses' aides in six separate courses of 6 months each.
Operated National School of Nursing for 6 years; 177 graduates through 1952.

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Operated for 10 years malaria-control program; at present in four provinces.

Operated yaws-control program throughout one province.

4. Civil aviation

The topography of Ecuador makes aviation extremely important in communication and transportation. There are many isolated sections of Ecuador which are virtually inaccessible except through air transportation.

The civil aviation mission has been operating in Ecuador since 1950. Its activities have resulted in a significant increased emphasis on civil aviation development in Ecuador. In January 1952, a Department of Civil Aviation was created (Dirección de Aviación Civil) which has resulted in considerably more activity in civil aviation than ever before has been experienced in Ecuador.

The stage of development of civil aviation in Ecuador seems elementary in comparison with that of many other countries. The airports are in poor condition, including those of the two largest cities, Guayaquil and Quito. No satisfactory supervision exists over pilot qualifications and aircraft maintenance. Yet progress is being made through technical cooperation endeavors. A comprehensive airport survey has been made with all the usable landing facilities having been surveyed. A card index of all personnel employed in civil aviation has been created. A better type pilot's license has been designed for issue. Aircraft operating in Ecuador are being reviewed, together with pertinent information including flight history, dates of overhauls, and engine checks or changes. This information will be used to enforce routine periodical inspection of the aircraft and engines. All pilots operating in Ecuador are being given medical examinations in accordance with CAA standards. Conditions adversely affecting the safety and convenience of air transportation discovered through the orderly administrative processes being developed have demonstrated conclusively the need for these improvements.

A number of Ecuadorans returned from training in the United States under grants awarded by the program are occupying positions of importance in civil aviation and raising technical proficiency in the various fields of aviation. As examples, one trainee is now vice president and chief of maintenance of an Ecuadoran commercial airline. Two others are vice president and chief of operations, and chief of maintenance, respectively, of another Ecuadoran commercial airline.

The technical assistance aviation program in Ecuador is now in its early stages of development. Achievements to date indicate that a great increase in the security and convenience of air transportation may be expected through the technical assistance provided in this phase. The Ecuadoran Congress has exhibited great interest in the civil aviation program, with one of the members who is a former trainee under the program taking an active lead in presenting aviation needs.

5. Weaving and manual arts

Over one-half of the wool grown in Ecuador comes from the small herds kept by the Indians. The handweaving of woolen textiles is an important feature of the economy of these peoples. In some areas,

particularly in northern Ecuador, weaving has assumed considerable economic importance.

However, the spinning and the weaving is poor by modern standards. Also, the dyes used for the cloth have not been fast, curtailing the market available to the Indian weavers. A point 4 technician has been provided to stimulate the handcraft production of textiles through improvement of the looms, preparation of raw materials, spinning, dyeing, and weaving. Marketing will also be improved and it is hoped that this handcraft will be operated among more Indian families over a greater territory. The overall aim of the project will be to provide more cloth for national use, and raise the economic level of the Indians, as well as provide the materials at good prices for the rest of the population. This program is in active operation, with improved looms being demonstrated and better methods of spinning, dyeing, weaving, and styling of cloth being made available gradually to more and more Indian weavers.

6. Railroads

Although aviation is assuming an ever-growing importance in the Ecuadoran economy, surface transportation is still the vital factor in the economic development of the country. Ecuador has an area of 106,000 square miles and less than 800 miles of railroads, a large portion of which cannot be used the year round because of heavy rains and high water.

The Quito-Guayaquil line, the coast to highland artery, carries the bulk of Ecuadoran imports and coastal produce to its destination in the sierra, and highland products for export or consumption to the coast. It is of prime importance to the people of Ecuador that this line function continually and efficiently, and it is necessary for the Ecuadoran Government that it does not become a burden to the state.

The United States, at the request of the Government of Ecuador, has provided the services of a railroad dispatcher to make recommendations to increase the capacity of the freight loads moved, to decrease the time lapse from port to capital, to get greater utilization of the freight cars available, and to improve the general dispatching pattern of the road.

This assistance has been received with enthusiasm by the railroads and the country as a whole. Tests are being made at this time of some of the recommendations made by the United States consultant. Additional requests from railroad officials for other types of assistance are being considered. A railroad accountant is due to arrive shortly.

7. Visit to projects

On the day of arrival in Quito, the group had an opportunity to visit several of the projects in close proximity to the city. An excellent example of the value to be derived from a program of technical cooperation is the new and modern maternity hospital in Quito. The hospital, built with technical cooperation funds and supervised in its initial stages by United States technical experts in the field of health, now cares for approximately 92 percent of the city's maternity cases. The hospital was constructed in the first instance to care for the needs of families who were unable to afford private hospitaliza-

tion, but the increasing use of the facilities has made necessary a considerable expansion of the original purpose. Paying patients are admitted to the hospital and the funds derived in this manner are turned back into the operation of the facility.

The maternity hospital has achieved a significant and unusual success in the first 2 years of its operation. The infant mortality rate at the hospital has been 1.04 percent and the maternal mortality rate has been 0.04 percent. Twelve thousand infants have been delivered at the hospital during the period it has been in operation, and the staff was justifiably proud of the fact that no mother or child had been lost where the mother had made regular visits to the hospital in the prenatal period and had received instructions previous to the time of the child's birth.

The staff of the hospital at the present time consists of 28 doctors, 35 nurses, and 65 auxiliary workers. One of the doctors is a United States national, and together with two Ecuadoran doctors, the three form a commission for the operation of the hospital facility.

From the maternity hospital the study group, accompanied by United States and Ecuadoran technical cooperation experts, visited the hospital for the curable insane which has just been completed outside of Quito. The new facility has a capacity of 136 patients, although at the time of the visit of the study mission there were only 80 patients in the hospital. The annual cost of operation of the facility is approximately $17,000.

Technical cooperation programs for Ecuador

	United States funds	Ecuador funds	Other funds	United States personnel	Ecuador personnel
Calendar year—					
1942	(1)	$68,646.86		2	271
1943	(1)	68,646.86		3	895
1944	(1)	131,353.13		2	1,276
1945	(1)	293,729.37		2	988
1946	(1)	126,072.60		2	602
1947	(1)	76,204.61		2	378
1948	(1)	382,192.13	$202,829.99	2	540
1949	$373,925.43	418,724.67	50,158.50	6	492
1950	429,024.44	592,531.86	5,544.55	4	506
1951	380,970.64	930,085.08	1,412,224.34	1	502
1952	1,034,006.90	1,650,412.35	421,351.25	6	638
1953	906,306.29	911,058.00	1,366,339.31	6	548
1954	1,101,803.00	819,075.90	108,300.33	4	553
Proposed, fiscal year 1955	1,208,403.00				

1 No breakdown of yearly contribution was available, but the total United States contributions from 1942 to 1948 were estimated at $3,921,523.45.

Expenditures on agricultural aspects pertaining to technical cooperation in Ecuador, fiscal years 1942 to 1951, inclusive

	Scientific and technical cooperation	Training of Ecuadoran nationals in United States	Total
1942	$1,160		$1,160
1943	71,226		71,226
1944	109,864	$12,849	122,713
1945	114,368	3,000	117,368
1946	83,059	13,306	96,365
1947	38,648	16,318	54,966
1948	40,960	8,196	49,156
1949	62,972	8,445	71,417
1950	92,957	6,120	99,077
1951	93,755	986	94,741

Technical cooperation program in agriculture, Ecuador

	United States funds	Ecuador funds	Other funds	United States personnel	Ecuador personnel
Calendar year—					
1942		$68,646.86		1	34
1943		68,646.86		4	60
1944		68,646.86		4	80
1945		68,646.86		15	80
1946		68,646.86		15	80
1947		68,646.86		15	80
1948		68,646.86		15	80
1949		68,646.86		16	80
1950		68,646.86		16	80
1951		68,646.86		15	80
1952	$333,579.59	33,003.30		15	157
1953	288,438.83	75,247.52	$3,300.33	15	140
1954	280,209.00	75,247.52	3,300.33	15	140
Proposed, fiscal year 1955	324,700.00				

Technical cooperation programs in health and sanitation, Ecuador

	United States funds	Ecuador funds	Other funds	United States personnel	Ecuador personnel
Calendar year—					
1942	(1)			5	241
1943	(1)			6	855
1944	(1)	$262,706.27		7	1,210
1945	(1)	225,082.51		7	926
1946	(1)	13,201.32		7	536
1947	(1)	1,320.13		7	314
1948	(1)	269,330.85	$202,829.99	7	478
1949	$290,470.97	305,523.35	50,158.50	11	414
1950	433,797.13	470,815.78	5,544.55	9	431
1951	275,014.78	834,903.57	1,412,224.34	8	425
1952	387,421.51	1,590,874.40	421,351.25	8	461
1953	308,019.36	782,741.26	1,361,838.98	9	384
1954	[2] 310,000.00	630,000.00	100,000.00	5	390
Proposed, fiscal year 1955	400,700.00				

[1] No yearly breakdown available, but the total United States contributions from 1942 to 1948 is $3,704,506.52.

[2] This figure includes the estimated salaries for 1954.

Technical cooperation in education, Ecuador

	United States funds	Ecuador funds	Other funds	United States personnel	Ecuador personnel
Calendar year—					
1945				1	2
1946	(1)	$44,224.42		1	6
1947	(1)	6,237.62		2	4
1948	(1)	44,224.42		3	2
1949	$83,454.39	44,554.46		3	18
1950	106,328.31	53,069.31		5	15
1951	105,955.86	26,534.65		4	17
1952	205,398.61	26,534.65		9	21
1953	124,360.56	53,069.31		7	19
1954	200,000.00	123,828.38		5	19
Proposed, fiscal year 1955	220,200.00				

[1] No yearly breakdown available, but the total United States contribution from 1946 to 1948 is $127,016.93.

Technical cooperation program in housing, Ecuador

	United States funds	Ecuador funds	Other funds	United States personnel	Ecuador personnel
Calendar year—					
1952	$17,029.62			1	1
1953	31,209.10			1	1
1954	23,000.00				1

Technical cooperation program in civil aviation, Ecuador

	United States funds	Ecuador funds	Other funds	United States personnel	Ecuador personnel
Calendar year—					
1952	$38,845.19			2	
1953	21,836.51			1	
1954	41,900.00			1	

Technical cooperation in administration, Ecuador

	United States funds	Ecuador funds	Other funds	United States personnel	Ecuador personnel
Calendar year—					
1952	$17,282.62			3	1
1953	54,952.59			3	1
1954	63,500.00			2	1

Technical cooperation program in industry, Ecuador

	United States funds	Ecuador funds	Other funds	United States personnel	Ecuador personnel
Calendar year—					
1952	$23,790.47			2	4
1953	57,676.22		$1,200.00	2	3
1954	103,000.00	$20,000.00	5,000.00	2	2

Technical cooperation program in railroad and transportation, Ecuador

	United States funds	Ecuador funds	Other funds	United States personnel	Ecuador personnel
Calendar year—					
1953	$11,154.33			2	
1954	56,200.00			2	

Technical cooperation program in public administration consultant, Ecuador

	United States funds	Ecuador funds	Other funds	United States personnel	Ecuador personnel
Calendar year—					
1952	$10,659.29			1	
1953	8,658.79			1	
1954					

Technical cooperation program in regional field audit, Ecuador

	United States funds	Ecuador funds	Other funds	United States personnel	Ecuador personnel
Calendar year—					
1954	$24,000			1	

XVI. COLOMBIA

A. VISIT TO TIBAITATA

On October 19, the study mission arrived in Bogotá, Colombia. The study mission proceeded immediately to the Rockefeller Foundation Agricultural Research and Experiment Station, at Tibaitata, where the foundation has recently completed one of the most modern installations of its kind in the entire hemisphere. Working in close cooperation with the *servicio* agricultural program and the United States and Colombian technical experts, the station is largely concerned with basic research and experimentation. When disease-resistant agricultural strains are developed, it is anticipated that the *servicio* will distribute seed to farm organizations and individual farmers throughout the Republic of Colombia and will carry on a considerable program of farm extension work. The technical assistance people and the foundation representatives are pursuing their work in their respective areas without duplication or overlapping, and it was felt by the subcommittee that the plan as presently operating in Tibaitata demonstrates the considerable assistance that can be given to an under-developed country by American foundations of the type represented by the Rockefeller group in that country. The foundation will also make available to the United States and Colombian personnel working in the agriculture *servicio* a modern laboratory and other scientific facilities generally not available in the several departments of agriculture throughout Latin America or in the technical cooperation *servicios*.

The farm being developed by the foundation comprises 1,100 acres and will provide a work shop for the foundation in its research, education, and extension work. At the time of the visit by the study mission, the experiment station had in the stage of development and experimentation 2,000 types of wheat, 400 varieties of potatoes, 7,000 varieties of barley, and at the end of 1953 the foundation expected to have available for distribution through the entire country, some 200,000 pounds of seed.

B. VISIT TO NURSES' SCHOOL

The subcommittee also had an opportunity to visit the nurses' school on the campus of the national university. The school was constructed by the *servicio* established under the provisions of the technical cooperation program in the Ministry of Health, and *servicio* funds are contributed to the maintenance and operation of the school.

More than 100 graduate nurses have already completed their training in the nurses' school and are presently employed throughout the Republic in various hospitals and clinics. Many of the graduate nurses have been sent to the United States to do additional graduate work, and a number of those who have taken the additional training have done so on grants made available by the Rockefeller and Kellogg

Foundations. The study mission was told that most of the girls entering the nursing school were from middle class rural families, and that one of the greatest obstacles in the early operation of the school was to overcome an almost universal prejudice against nursing as a profession. However, it was stated that this problem had been largely resolved and that admission to the school was presently being sought by more and more of the better educated and more readily adaptable girls of good family who desired to become members of the nursing profession. One of the greatest handicaps in the operation of the school was a lack of adequate and properly prepared material in Spanish on the practical and technical aspects of nursing. Many fine texts are available in English and in other languages, but these, the study mission was told, were of no great use in the classroom work at the nurses' school. When student nurses are not engaged in laboratory and classroom work at the school, they are required to do student nurse work in the city hospitals and clinics. All of the students live in comfortable rooms and dormitories at the school, and adequate facilities for recreation, meal preparation and service, and other needed adjuncts of an institution of its kind are immediately available on the premises of the school itself.

Following the visit to the nurses' school, the study group attended a luncheon given by the American Society of Bogotá. Mr. Jackson spoke following the luncheon on various problems and subjects of mutual interest.

C. VISIT TO ZIPAQUIRA

After the luncheon the group visited a program which is most unusual but nonetheless worth while. Goiter is endemic in Colombia and many citizens of that Republic suffer from the disease. The technical cooperation project at the salt mines of Zipaquira was established for the purpose of iodizing the output of the great mines. At the present time the project is adding iodine to some 300 tons of salt per month. Inasmuch as the annual consumption of salt in Colombia is between 70,000 and 90,000 tons, it is evident that only a small beginning has been made in the iodization program. The ultimate goal of the project is to insure that all of the salt produced in the Zipaquira mines is iodized, and that the present situation with respect to goiter is materially reduced, if not completely eradicated. In spite of the limited operation presently being carried on, the study mission was told that a significant decrease in goiter is already apparent.

D. TECHNICAL COOPERATION

The overall program of technical cooperation in Colombia is a comprehensive one. The principal program operations in Colombia, as outlined in a brief prepared by the TCA in that country, are given below.

The general agreement which serves as the basic contract for the cooperative program of technical assistance between Colombia and the United States of America was effected by an exchange of notes between the Government of the United States of America and the Government of Colombia dated March 5 and March 9, 1951. Under the terms of this agreement the Government of the United States has made available to the Government of Colombia technical assist-

ance programs on the basis of official requests and the negotiation of agreements between the United States operations mission and the appropriate agency of the Government of Colombia. Although the technical cooperation program in Colombia is commonly identified with the signing of the general agreement, the Government of the United States, through the Institute of Inter-American Affairs, has offered the Republics of Latin America programs of technical assisttance in the fields of public health, agriculture, and education since 1942. Arrangements were made to effect the first program in Colombia in 1942 with the passage of Law 36, and the establishment of the Servicio Cooperativo Interamericano de Salud Publica (SCISP) in January of 1943. Other programs predating the negotiation of the general agreement of 1951 include rubber development, agriculture, and civil aviation. The success in establishing and implementing programs of technical assistance has resulted in large part from the cooperative nature of the arrangements between the two Governments. Technical personnel assigned to the Colombian program have always worked in close collaboration with Colombian agencies and Colombian technical personnel, and the financial support for the several facets of the program has been supplied in greatest part by Colombian sources.

Contrary to common belief, the technical cooperation program in Colombia is limited almost entirely to the supplying of technical personnel and services, with the exception of modest monetary grants in the fields of public health and agriculture, which serve as contributions to the program funds for the implementation of exemplary and demonstration activities with the joint participation of Colombian and United States technical personnel. Where contributions to such funds have been made, the Colombian participation has usually equaled, and generally exceeded, the contribution by the United States. No provision is made for the negotiation of loans. Similarly, no funds are available to finance projects or purchase equipment except on a very modest scale where these are essential for demonstration purposes. The emphasis is upon technical personnel who work cooperatively with Colombian technicians.

The programs in public health and agriculture in Colombia function through administrative mechanisms known as servicios, established in collaboration with the Ministries of Public Health and Agriculture. Colombian technical personnel and technicians from the United States comprise the staffs of these organizations and funds for their operation come directly from the two Governments. Under this arrangement projects are initiated and implemented on a demonstration basis. After these projects are functioning effectively they are transferred to the jurisdiction of a Colombian technical agency.

The central theme of the technical cooperation program which is cooperatively maintained by the two Governments is the training of Colombian personnel, with the objective of raising the level of technology as a complementary aspect of the development of Colombia. Such training is achieved in two ways: (1) United States technicians working closely with Colombian personnel, thereby interchanging technical knowledge; and (2) carefully selected Colombian professionals are given opportunities to obtain specialized training in the United States in those technical fields where such training cannot be obtained in Colombia.

1. Health and sanitation

For more than 10 years the Governments of Colombia and the United States have actively cooperated in a program of public health through the Ministry of Public Health and the Institute of Inter-American Affairs. Since the negotiation of the original agreement in 1943, supplementary agreements providing for the continuation and financing of the program have been made, the last being negotiated in November 1950 extending the program until June 1955, and the latest financial agreement in January 1953, covering the program operations until December 31, 1953.

The objectives of the cooperative program in health and sanitation, as expressed in the first clause of the basic agreement now in force, are—

a. To promote and strengthen friendship and understanding between the peoples of the Republic of Colombia and the United States of America and to further their general welfare;

b. To facilitate public health and sanitation activities in Colombia through cooperative action on the part of the parties to this agreement; and

c. To stimulate and increase the interchange between the two countries of knowledge, skills, and techniques in the field of public health and sanitation.

In order to accomplish these objectives, the United States has, and continues to make available, the funds necessary to pay the salaries and other expenses of a group of technicians known as the field party, as well as such other expenses of an administrative nature as the Institute of Inter-American Affairs may incur in connection with the program. As concerns funds made available for the actual operation of this cooperative program, the Government of Colombia has progressively taken over this obligation, and since July 1, 1946, for every dollar contributed by the United States Government, the Republic of Colombia has contributed the equivalent of $10 in local currency. These operating funds, once they are received and deposited to the credit of the servicio, lose their particular indentity and are disbursed, as servicio funds, in accordance with the fiscal regulations established by the servicio and approved by the Comptroller General of the Government of Colombia.

By agreement, the work of this cooperative program consists of individual projects. The objectives, plan of work, amount of money to be expended, and other details are embodied in a written project agreement which is mutually acceptable to and signed by the Minister, the chief of field party, and the director of the servicio.

At the present time the field party in health, welfare, and housing assigned to Colombia by the Institute of Inter-American Affairs, is made up of 8 members: A physician, 2 sanitary engineers, 1 industrial hygiene engineer, 1 nurse consultant, 1 housing economist, 1 business manager, and 1 administrative assistant. With the exception of the housing economist and the nurse consultant, all members of the field party hold "ad honorem" positions in the servicio.

The servicio during its years of existence in Colombia has operated 86 projects directed toward the fulfillment of the objectives pre-

viously cited; and in the selection of projects to be carried out has been guided and weighed by the following factors:

a. Technical and administrative feasibility.
b. Early recognizable results.
c. Results attainable relative to cost.
d. Takeover ability by the Government of Colombia.
e. Number of persons affected.

Of the 86 projects mentioned, 72 have either been completed or turned over to other government agencies for continuing operations, and today the activities of the servicio fall into the following general categories:

(*a*) *Insect control.*—This activity is carried out under the direction of the malaria division of the servicio, which, with its laboratories, conducts field investigations, research and surveys; makes a distribution of antimalarial drugs on a nationwide basis; and carries out a DDT spraying program in selected areas of the country, taking into consideration the incidence of malaria and economic importance of the regions to be sprayed.

It is estimated that of Colombia's 12 million inhabitants, 7 million live in malarious regions and that there are an estimated 700,000 cases and 4,000 deaths caused by malaria per year.

In addition to the actual work carried out by the malaria division, it is also charged with administration and technical direction of the Caribbean insect-control program which provides for the control of malaria and the eradication of the urban vector (Aedes-Aegypti) of yellow fever. The program is financed by the Government of Colombia with technical assistance and supplies from PASB (Pan American Sanitary Bureau), World Health Organization (WHO) of the United Nations, and equipment and supplies from UNICEF (United Nations Children's Fund).

For the calendar year 1954, plans have been made to spray 537,000 houses which will protect 3,528,000 people.

(*b*) *Nutrition.*—In the development of a complete program of nutrition and feeding for any country, it is necessary to consider all the possible native food sources before advising that it is necessary to import food from other geographical areas. This requires the collection of data concerned with the nutritive value, not only of the foods that presently play an important part in the usual food requirements, but also those foods relatively unknown, native to the country and of high nutritive value, that could be incorporated with effective results into the national diet.

A study of this nature is being carried out by the Servicio through the National Institute of Nutrition which, with its laboratory, has systematically conducted analytical studies to determine the nutritive value of most of the foodstuffs consumed, as well as produced in Colombia. In addition, dietary surveys have been made in certain regions of the country. As this information is collected, it is being published in order that those entities interested in, and working with, the nutrition problems of the country will have sound basic material for popular distribution, and that education may be directed toward the changing of food habits, that increased production of foods of high nutritive value will be encouraged, and improved distribution and marketing of these foods to areas where production is normally limited or absent will be initiated.

This project also promotes improved nutrition by means of school and home gardens, school lunch programs, and preparation of menus for industry.

(c) *Public health engineering.*—The Public Health Engineering Department of the Servicio Cooperativo Interamericano de Salud Pública acts as the National Department of the Ministry of Public Health on matters pertaining to that field, through the Servicio's central and regional offices.

Principal activities are control of public water supplies, special studies on water supply requirements, training of water plant operators, investigations of and advising on water rate cases and control of swimming pools; study of sewerage systems, industrial waste and refuse problems; environmental sanitation, and training of sanitarians; demonstration rural sanitation projects; preparation of bulletins and standards; and review and approval of plans for water supplies, sewerage systems, hospitals, clinics, market and public health structures. The Department also supervises the planning, design, and construction of water supplies and sewage disposal systems for public hospitals, and acts as consultant to the Department and city health departments.

At the request of the Ministry of Public Health, a new sanitary code was prepared for Colombia which was approved in May of 1953.

(d) *Control of endemic goiter.*—Being greatly preoccupied with the problem of endemic goiter, during the years of 1945–48, the Servicio, through its Division of Nutrition, conducted a survey on a national basis to determine the incidence of goiter in Colombia. Of the 182,243 school children examined, 52.62 percent were found to show evidence of simple goiter. During the same period the Division of Nutrition, having conducted studies demonstrating the lack of iodine in the salt produced and consumed, developed a process for the addition of iodine to this salt.

Having demonstrated the high incidence of simple goiter, and having developed a process for the iodization of salt, the Servicio was instrumental in securing legislation providing for the iodization of all salt produced, both terrestrial and marine, for human consumption. Since mid-1950 the Servicio has been operating a pilot plant, iodizing 300 tons of salt per moth in the Casablance evaporating plant located in Zipaquirá, the largest terrestrial salt producing area in Colombia. This salt is presently being distributed to the Department with the highest goiter incidence.

(e) *Industrial hygiene.*—An Industrial Hygiene Service has been established in recognition that occupational health is an inseparable part of community or public health. It promotes the maintenance of working environments in factories and mines in a condition conducive to good health and is concerned with all factors that cause sickness, disability, absenteeism, and death of workers. It promotes adequate plant health services, including preemployment and periodical physical examinations by private or plant physicians, engineering surveys and studies for the evaluation of toxic properties, and laboratory services for the detection and determination of harmful materials to which a worker may be exposed.

Four hundred industrial plants and mines have been visited for information, which includes data on medical services, security services, working environments, and the housing, sanitary and recreation facilities provided to workers. A chemical laboratory has been

established and a full complement of analytical and field equipment procured, including a portable X-ray machine with its own generator.

Presently a study of a coal mine is being made. All workers are receiving complete medical examinations including X-ray filming of the chest. An engineering study of the working environments is underway currently, which includes the collection and analysis of samples of air-borne dusts, of the coal itself, and of the rock formation.

This work will be a cooperative endeavor in that the Industrial Hygiene Service and the National Department of Medicine and Industrial Hygiene of the Ministry of Labor have already begun work together to improve the lot of the workers.

In addition, the keeping of better accident and medical records in plants is to be promoted, and closer liaisons between the Industrial Hygiene Service physicians and private industrial practitioners developed to the end that recent advances in industrial medical procedures may become more widely utilized.

(f) Yaws control.—Yaws, a dreaded tropical disease which maims, cripples and disfigures, is prevalent in Colombia, especially in the Pacific coast area. Prior to 1950 all programs directed toward the control of this disease had failed. With the demonstration of the effectiveness of penicillin in its treatment, early in 1950 the Servicio formed ambulatory squads who travel by canoe or motorboat with their equipment through this jungle area seeking those afflicted with the disease.

Since the initiation of the program some 120,000 of the estimated 150,000 cases have been treated. Checkups demonstrate that with the initial treatment the lesions in 75 percent of those treated have closed, and an additional 23 percent improved. The effectiveness of this program in eliminating the source of infection is also demonstrated by the fact that in those areas where treatment was first begun no new cases are appearing among children.

(g) Operation of health center, Bogotá.—The Barrio Ricaurte Health Center of zone VI of the health department of the city of Bogotá, is operated by the Servicio in accordance with a contract between the Ministry of Public Health, the Servicio, and the city of Bogotá. While it serves a population of some 65,000 people, the Servicio's principal interest in the operation of the center is to provide a training field for public health workers, especially nurses and sanitarians, which is unobtainable elsewhere with equal educational standards of operation. The services provided by the center are a prenatal clinic, well and sick baby clinic, a venereal disease clinic, a dental clinic, laboratory services, vaccinations, and the issuance of health certificates to workers. A staff of public health nurses and sanitary inspectors is maintained who make home visits within the zone. The prenatal clinic of this center is being used presently to provide this experience field for the nurse-midwife program being conducted in Colombia as the result of an agreement between the National Superior School of Hygiene, the Pan American Sanitary Bureau, World Health Organization and UNICEF.

(h) Health education.—The public health education division of the Servicio is charged with the development of the process through which individuals and communities are influenced to raise health standards through group or individual action. It is more than merely giving knowledge and information—it is motivating people to develop

desirable health habits. This is accomplished by the preparation of articles on health subjects which are sent to leading newspapers for publication, the preparation of health posters and pamphlets for nationwide distribution, short radio broadcasts, and the showing of movies. Also special courses have been given to primary and secondary school teachers covering general health awareness, sanitation and nutrition projects. Textbooks on health awareness have been written, published, and distributed to school teachers.

(*i*) *Participation in the operation of the National Superior School of Nursing.*—Under the jurisdiction and financing of the then Ministry of Hygiene, this school opened its doors for operation in a building adapted for its use in 1944. Realizing that that building was inadequate, the Servicio constructed the modern building located on the grounds of the University City in Bogotá, which the school now occupies. This school is the only one in Colombia which requires university entrance requirements and gives a complete 3-year course which includes practice in public health nursing. In January 1951, the school was placed under the jurisdiction of the National University of the Ministry of Education, which gives the school university status.

As of February 1953, there have been 143 girls graduated from the school. While the number is small, these graduates have exerted a profound effect on the raising of entrance requirements of the other nursing schools in the country, increasing salaries, and establishing nursing as a profession in Colombia. In addition, they have served as the nucleus for directors and teachers, so necessary to new schools.

Since its beginning in 1943, the school has been headed up by a North American nurse educator. By resolution of the Directive Council of the National University, a member of the HAA field party has been, and presently is, director of the school. Believing that the members of the field party directing the school should have financial as well as moral support, and since the physical plant as built by the Servicio has required certain additions to give the maximum efficiency of operation, the Servicio has participated in the maintenance and operation of this school since 1949.

(*j*) *Training.*—Both the Institute of Inter-American Affairs and the Servicio have had to train professional personnel which are so necessary to the successful operation of any program. To obtain these personnel the Servicio has engaged in training projects which have enabled professionals to obtain specialized training outside of the country, as well as sponsored local training courses. For training outside of the country the Servicio has offered 55 direct grants, and participated with international agencies such as the Institute of Inter-American Affairs with 69 grants, Kellogg Foundation with 11 grants, United States Public Health Service with 7 grants, and Pan-American Sanitary Bureau with 4 grants.

During July and August of 1953 a study of medical education throughout Colombia was made by a mission which was recruited by the Institute of Inter-American Affairs. The mission was requested, sponsored, and had its expenses defrayed by the National University of the Ministry of Education, Bogotá. The report of the mission and their recommendations will be published shortly. To implement the recommendations made for furthering medical education and postgraduate training it will be necessary to provide technical assistance to the medical schools of Colombia.

To provide for efficiency of operation and the supplying of services as needed to its 825 employees, as of June 30, 1953, the Servicio, in addition to its central office and warehouses located in Bogotá, has 14 regional offices and warehouses situated outside of Bogotá in locations convenient to program operations.

Through the years this well-conceived program of cooperation has at least in part helped to eliminate those inequalities of health opportunities existing among nations, which led the foreign ministers meeting in Rio de Janeiro to resolve to adopt measures "to preserve and develop their reserves of vital and strategic products" and to promote "measures to accomplish certain common plans and objectives which will contribute to reconstruction of the world order."

2. Housing

In response to a request from the Instituto de Crédito Territorial, a housing economist has been brought to Colombia to collaborate with personnel of that agency in the organization of data to be utilized in the preparation of plans for housing developments in the several parts of the nation. This technician, working in collaboration with technicians from the Dirección Nacional de Estadística, first assisted with the processing and classification of the data contained in the 1951 census of housing and now, working in cooperation with the statistical staff of the Instituto de Crédito Territorial, is preparing data on housing prerequisite to the formulation of housing plans by the Colombian housing agency.

3. Agriculture

Prior to the finalization of the agreement establishing the Servicio Técnico Agrícola Colombiano-Americano on June 9, 1953, the agricultural activities carried on within the framework of the technical assistance program of the United States Government in Colombia were concentrated upon specific and limited projects. These activities were divided into three parts: (1) General agriculture; (2) agricultural education; and (3) rubber development.

Under the program in general agriculture, a technician of the United States Department of Agriculture came to Colombia in late 1951 to render technical assistance in the organization and coordination of soils research, survey, and classification. In cooperation with technical personnel of the Ministry of Agriculture of Colombia and other Colombian agencies engaged in soils work, a National Soils Committee was formed with the objective of exchanging information and coordinating all phases of soils work. The United States technician performed a number of soils analyses, particularly as related to irrigation developments either already established or under consideration.

Early in 1952 a research adviser from the United States Department of Agriculture was assigned to the National Federation of Coffee Growers experiment station at Chinchiná, Caldas. For approximately 18 months he collaborated with technical personnel of the federation in the organization of research on the many coffee varieties of the country, particularly as related to plant pathology and yield. A biometrician of the United States Department of Agriculture was brought to Colombia for a short assignment, his specific task being to work with the technical staff of the federation in the evaluation and planning of effective experimental designs.

In December 1951, the Technical Cooperation Administration and Michigan State College became parties to a contract to offer technical

assistance to the two national colleges of agriculture in Colombia, there being reason to believe that such a program could be most effectively carried on in cooperation with a leading land-grant college of the United States. In January 1952, seven Michigan State College agricultural professors came to Colombia to work with the agricultural schools in the development of faculty and curricula. These men represented specializations in animal husbandry, agricultural engineering, soils science, and forestry. Although most of the original group returned to Michigan State College at the end of the 18 months' assignment, replacements were sent, and it is expected that the present contract will be continued until June 30, 1955. Under this program promising members of the faculty of the Colombian colleges and recently graduated students are sent to Michigan State College for additional training, with the agreement that they must return to serve as faculty members of the Colombian agricultural colleges for a specified period of time.

The program in rubber development employs the services of two technicians of the United States Department of Agriculture. A botanist, who recently returned to the United States, explored the remote jungle areas of the Amazon basin in search of indigenous rubber tree varieties which might be employed in the genetic research program to develop high yielding and disease resistant domestic rubber strains upon which commercial developments are feasible. The second technician, an agriculturalist, works at the experimental rubber plantation of the Caja de Crédito Agrario, Industrial y Minero, on a project to train Colombian rubber workers. This plantation is maintained at Villa Arteaga in the isolated Uraba region of northern Colombia.

The agreement establishing the Servicio Técnico Agricola Colombiano-Americano was signed on June 9, 1953, and already a number of projects are taking form. Under the Servicio arrangement a limited number of United States technical personnel will work with Colombian technicians in what is essentially a demonstration and training program. The Servicio is a mechanism whereby United States technicians work within an entity which is a dependency of the Ministry of Agriculture. Under this arrangement a high degree of autonomy for efficiency of operations is achieved. The funds for the operation of the Servicio are contributed by the Government of the United States and the Government of Colombia. During the first year of operations the ratio of contributions is at 1 to 1. Eventually the entire operation will be turned over to the Government of Colombia, when the United States technicians have completed their tasks. A series of projects are being undertaken, and as each becomes mature it will be replaced by another. Plans are now formulated to establish projects of the following types:

a. A model agricultural extension service in the Department of Boyacá, which will include the dissemination of technical knowledge, a program to encourage better homelife, and the organization of rural youth groups. This extension service will become the model upon which may be based a countrywide extension service within the Ministry of Agriculture.

b. A technical assistance project in the operation and maintenance of the Coello and Saldaña irrigation projects in the Magdalena Valley is in operation. A demonstration type of farm is being established where exemplary agricultural practices will be used, the objective

being their dissemination to farm operators. These irrigation projects were built for the Caja de Crédito Agrario, Industrial y Minero, a portion of the funds being supplied by a loan from the Export-Import Bank. Since the completion of these irrigation projects by the Caja the crop yields have been outstanding, but serious problems of maintenance and land utilization point toward the need for technical assistance.

c. The National Federation of Coffee Growers has requested an industrial chemist to assist Colombian technicians in the search for a practical use of coffee byproducts, particularly coffee hulls which are largely waste material today.

d. Plans are being made to implement a project in grain storage, this being a serious problem in a country as humid and tropical as Colombia. This program will concentrate on training Colombian personnel.

e. A machinery school will be established in conjunction with one of the Facultades de Agronomía where short courses will be given in machinery operation, maintenance, and repair. The importance of such training in an agricultural country which is becoming increasingly mechanized cannot be minimized.

f. Arrangements are being made for the United States technical personnel to work with the newly formed Institute de Colonizacion e Inmigracion in the formulation of a long-range plan to settle large parts of the country which today are sparsely inhabited. Technical assistance from the United States will probably include a livestock specialist, an agriculturalist with training in agricultural economics, and a forester.

4. Minerals

Under the leadership of the Instituto de Fomento Industrial, Colombia has embarked upon a long-range project to increase coal production in the Cali area for export. The project has been divided into two phases: (1) The expansion of mining operations in the Cali area; and (2) the construction of a processing plant, expansion of transportation facilities, and the installation of port loading equipment. An equipment credit loan in the amount of US$2 million has been negotiated with French interests to finance the processing facilities, transportation improvement and port installations, an additional sum of US$1 million being available from the same source to finance mine development in the Cali area.

Since 1948 the United States Government has provided intermittent technical assistance to the coal project, and since 1951 at least one technician from the United States Bureau of Mines has been available to work cooperatively with technicians of the Instituto de Formento Industrial. One phase of this technical assistance has been oriented toward mine improvement, and the other toward the development of coal processing facilities. In furtherance of this program, an agreement was negotiated between the United States operations mission and the Instituto de Fomento Industrial providing for the continuance of the program and cooperative financial support. Under the present arrangement, the United States operations mission provides the salaries of the technical personnel and pays the cost of bringing them to Colombia. All other expenses, including allowances and transportation within Colombia, are reimbursed to the Government of the United States by the Instituto de Fomento Industrial. Arrangements are

now being made to expand the scope of this technical assistance to the important Cerrejon coal field in northeastern Colombia.

A mining geologist who is assigned to Colombia on a regional basis is assisting agencies of the Government of Colombia, and particularly the National Geodetic Survey, on specific projects related to the development of the mineral resources.

5. Water resources and power development

A water resources and power development technician is working in collaboration with technical personnel of the National Institute for Water Utilization and Electric Development, in the locating, planning, and constructing of power facilities. This technician has made a series of reconnaissance trips in company with Colombian technicians, and has submitted recommendations on phases of the national power-development program. Under the terms of the agreement for the assignment of this technician, Colombia provides office space, secretarial and clerical assistance, supplies and equipment, and secretarial personnel.

6. Training

Although the general agreement for the establishment of the technical cooperation program in Colombia was signed on March 9, 1951, a training program carried on under the auspices of the Institute of Inter-American Affairs was initiated soon after the establishment of the Servicio Cooperativo Interamericano de Salud Publica in January 1943. Under a similar arrangement, training in civil aviation was made available to Colombian aviation technicians as early as 1942. These training activities were transferred into the overall technical cooperation program following the negotiation of the general agreement in 1951.

Since the concept of training is the basic philosophy of the technical cooperation program, active participation has been achieved through: (1) Sending United States technicians to Colombia to assist in training personnel by assisting them in developing specific projects; and (2) training selected Colombian technicians by sending them to other countries to take advantage of opportunities for specialized training. In the latter case there has been a tendency to send the trainees to the United States, but in some instances, largely because of language handicaps, it has been more desirable that the training be given in some other Latin American country. Technical training has a direct relation to the kinds of technical projects carried on under the United States operations mission program.

Each prospective trainee must be approved by the Colombian Government, and must submit a detailed application to the office of the director of the technical assistance program. The applicants who are approved by the appropriate Colombian officials and the director of the United States operations mission are cleared through the United States Embassy, and their applications forwarded to the Institute of Inter-American Affairs in Washington. Officials of the Institute of Inter-American Affairs accept or reject the trainee and arrange a training program with the appropriate technical agency.

Trainees follow carefully prepared programs of study, observation, and travel, always in contact with technical personnel. They observe facilities, talk with practicing technicians, and work at specific jobs. Often they work for several weeks or months along with United States technicians in order to "learn by doing."

Each Government agency tries to give the trainee the kind of individual training opportunity which relates to the specific work he will engage in upon returning to Colombia. Trainees do not always visit the United States. If adequate training facilities are available in another Latin American country, or if the prospective trainee cannot speak English, arrangements may be made to send him to another country for training.

The Government of the United States and the Government of Colombia share the costs of the training. Trainees are expected to return to Colombia at the end of the training program and to apply their increased skills and knowledge in the development programs of Colombia.

7. Financial contributions

For over 7 years the financial contributions of the United States to the program funds of the Servicio Cooperativo Interamericano de Salud Pública have been maintained at a ratio of 10 to 1; that is, the Government of Colombia contributing the equivalent in local currency of US$10 for each US$1 provided by the United States. For fiscal year 1953 the Colombian contribution, as specified by the contract, was US$1,250,000, and an additional amount equivalent to US$1,250,000 was provided by the National Government of Colombia. Third party contributions from departments, municipalities, and other sources are estimated to be the equivalent of US$200,000. The United States contributed US$125,000 to the program funds of the Servicio Cooperativo Interamericano de Salud Pública and also paid the salaries, allowances, and administrative expenses for maintaining the technical staff, which averaged seven members for the year.

Prior to the establishment of the Servicio Técnico Agrícola Colombiano-Americano, the United States technical assistance program in agriculture in Colombia was organized on an ad hoc basis as related to contributions of the agencies of the Government of Colombia. The technicians working in the fields of soils research and coffee production received a certain amount of administrative support from the agencies of the Government of Colombia to which they were assigned, but their salaries and allowances were paid by the Government of the United States. The rubber program has been and continues to be given general administrative support by the cooperating Colombian agency, but the salaries and allowances of the United States technicians have been and are being paid by the Government of the United States.

Under the terms of the recently organized Servicio Técnico Agrícola Colombiano-Americano, the Government of the United States has contributed US$95,200 to the program funds of the new Servicio, which has been matched by a contribution of the Government of Colombia in the amount of $238,000 (Colombian pesos) (US$95,200) to finance activities during the first 6 months of operations. It is planned that for fiscal year 1954 the level of contributions will be approximately US$200,000 from each Government. In addition, the Government of the United States will pay the salaries and allowances of the United States technical staff. Under special arrangements certain United States agricultural technicians work with other agriculturally oriented agencies of the Government of Colombia. Currently six United States agricultura' technicians are assigned to Colombia, but under present planning the size of the agricultural contingent should be substantially increased within the next year.

The cost of maintaining the contract between Michigan State College and the Foreign Operations Administration for the assignment of 7 professors of Michigan State College to the 2 national schools of agriculture in Colombia, and for 7 scholarships to enable promising Colombian faculty members to take graduate training at Michigan State College, is $155,000 for the current year. Because of the inadequate financing of the Colombian institutions, their only contribution is in the form of supporting services.

The consultant in water resources and power development receives office space, supplies and equipment, secretarial assistance, and expenses when away from headquarters from the Colombian agency to which he is assigned. The salary and allowances for this technician are paid by the Government of the United States.

The mining engineer who will soon be assigned to Colombia will receive office space, supplies, equipment, secretarial assistance, and expenses when away from headquarters from the Colombian agency to which he will be assigned. In addition, the Government of the United States will be reimbursed for all expenses other than international travel, transportation of effects, and base salary.

The public administration consultant will receive office space, supplies, equipment, secretarial assistance, and expenses when away from headquarters from Colombian sources.

The housing consultant receives office space, supplies and equipment, secretarial assistance, and expenses when away from headquarters from the Colombian agency to which he is assigned.

During fiscal year 1953 the technical assistance program in Colombia obligated approximately $1 million, including contributions to program funds, salaries, allowances, transportation of effects, and other expenses essential to the technical assistance program. It is estimated that Colombian support for the program, largely confined to the field of public health, totaled about $2.8 million.

Technical cooperation program in health and sanitation, Colombia

	United States funds [1]	Colombia funds	Other funds	United States personnel	Colombia personnel
Calendar year—					
1942	[2]	[2]	[2]	19	150
1943	[2]	[2]	[2]	19	970
1944	[3]	[3]	[3]	18	945
1945	[3]	[3]	[3]	13	850
1946	[4]	[4]	[4]	11	1,200
1947	[4]	[4]	[4]	10	980
1948	$60,000	$830,000	$201,000	10	750
1949	100,000	1,089,000	322,000	7	620
1950	100,000	1,000,000	200,000	7	580
1951	100,000	1,313,000	168,000	8	680
1952	100,000	1,420,000	183,000	8	1,070
1953	125,000	1,698,000	136,000	9	1,630
1954	125,000	1,900,000	125,000	11	1,850
Proposed, fiscal year 1955	[5] 382,800				

[1] Exclusive of salaries for United States personnel and their maintenance in the field.
[2] The combined total for 1942 and 1943 is $1,015,000 United States and $646,000 Colombia, and $66,000 third parties.
[3] The combined total for 1944 and 1945 is $600,000 United States and $396,000 Colombia, and $312,000 other funds.
[4] The combined total for 1946 and 1947 is $120,000 United States and $1,582,000 Colombia, and $351,000 from third parties.
[5] The 1955 estimate includes salaries.

Technical cooperation in aviation, Colombia

	United States funds [1]	Colombia funds	Other funds	United States personnel	Colombia personnel
Calendar year—					
1942					
1943					
1944					
1945					
1946					
1947					
1948					
1949					
1950					
1951	[1] $2,000.00	[2]		1	1
1952	[1] 2,000.00	[2]		1	1
1953					
1954					

[1] This is what was reimbursed for personnel.
[2] Amount expended not available, but they provided office space, secretarial and other personnel.

Technical cooperation program in agriculture and natural resources, Colombia

	United States funds [1]	Colombia funds	Other funds	United States personnel	Colombia personnel
Calendar year—					
1942					
1943					
1944					
1945					
1946					
1947					
1948					
1949					
1950					
1951		[2]		3	3
1952		[2]		6	10
1953	$95,200	$95,200		10	30
1954	150,000	150,000		20	60
Proposed, fiscal year 1955	[3] 609,400				

[1] Exclusive of salaries for United States personnel and their maintenance in field; and exclusive of contracts with Michigan State College which were negotiated in the amounts of $97,413 to cover the program from Dec. 12, 1951, to June 30, 1952; and $155,000 to cover the program from July 1, 1952, to June 30, 1953. For 1954 the program has been continued by special arrangement at the $155,000-per-year level.
[2] Colombia furnished office space, secretarial and other help.
[3] The 1955 estimate includes salaries.

XVII. PANAMA

Upon the completion of the South American portion of the study mission the group departed Bogotá for Panama on October 21. A briefing session was arranged by Ambassador John C. Wiley, and the study mission was given detailed information on all phases of our relationships with the Republic of Panama. On October 22, Congressman Jackson spoke at the noon luncheon of the Panama City Rotary Club, following which the study mission group were honored guests of the Panama Chamber of Deputies. Mr. Jackson's speech before the Chamber was well received and he was presented with a special resolution passed by the Chamber expressing that body's appreciation for the visit of the group.

On the evening of October 22 the subcommittee group were guests of the Panama City Lions Club, and Mr. Jackson made his third speech of the day.

A. UNITED STATES-PANAMA RELATIONS

The importance of Panama to the United States cannot be minimized. Constituting as it does the narrow link between the Americas, the Canal Zone, which is operated in perpetuity by the United States, is of significant importance in the event of possible future hostilities. As the result of the agreement by which the United States occupies the Canal Zone, a close and unusual relationship exists. It is inevitable that certain unique problems would in time grow out of such a political and social contact as is here represented, and while relationships between the North Americans and Panamanians in and near the zone are generally good, there are various points in issue which create continuing social and economic irritations. At the request of President José Remon Cantera, of Panama, several of these matters are currently the subjects for discussion between the two Governments.

B. TECHNICAL ASSISTANCE

The Republic of Panama and the United States of America have been working together in a program of technical cooperation since 1942. From this beginning has developed the present technical cooperation program in Panama. The major divisions of this program include agriculture, civil aviation, education, and public health and social services.

Under cooperative agreements the Republic of Panama allocates funds, makes available facilities, and appoints technicians and other employees; the United States assists with specialists and program funds.

1. Agriculture

In its desire to develop a more stable and diversified agricultural economy, it was evident to the Government of the Republic of Panama that additional technical assistance would be necessary.

This desire led to a formal request for a complete program which was presented to the Government of the United States of America.

The United States Department of Agriculture, through the Office of Foreign Agricultural Relations (OFAR), sent technicians to collaborate with the Panamanian Government. Under an arrangement with the OFAR, the University of Arkansas was invited to cooperate in this vital program. Its College of Agriculture sent a mission to assist in developing an expanded agricultural program.

The various offices of the technical cooperation program agricultural mission are located at the National Institute of Agriculture, in Divisa, the Ministry of Agriculture, in Panama City, and in other cities throughout the country. The new program is an outgrowth of work which was inaugurated on June 8, 1947, by the Ministry of Agriculture.

The four phases of the basic plan comprise—

a. Research: The study of agricultural problems and work toward their solution.

b. Education: The training of young Panamanians in agriculture and related subjects at the National Institute of Agriculture, in Divisa.

c. Extension: The work of "county agents," home demonstration agents, and specialists who teach farmers and housewives better practices in order to increase farm production and improve home conditions.

d. Special services: Serving farmers with machinery from the "fomentos" throughout the Republic.

One of the results of this program has been the revision of the curriculum of the school in Divisa to emphasize the teaching of agriculture, and at the same time to conform more with the second cycle of the school system of the Republic.

Panamanians are being trained to use plows and cultivators drawn by mules or oxen. Hoes are also being used to demonstrate their advantage for weeding purposes. There have been 227 native and imported varieties of crops planted for study to determine their adaptability to local conditions. These include corn, rice, vegetables, sorghums, clovers, alfalfa, and cotton. Also 27 tomato varieties have been planted and are under observation to determine those most resistant to wilt. There are 49 soybean and 3 sunflower varieties being tested to determine oil-production possibilities.

Selected varieties of forage legumes are ready for field tests. Preliminary greenhouse plantings have indicated those which will grow well under the light conditions prevalent in Panama if fertilizer requirements are met. There are 30 hectares of alluvial soils under cultivation and irrigation to determine the practicability of increasing food production by following similar practices on the thousands of acres of alluvial soils available in Panama.

To aid in this program of cooperative research and demonstration, agricultural equipment (such as rice driers and self-propelled rice combines, and insect and weed killers) and other aids to modern agriculture will be imported from the United States.

2. Civil aviation

The civil aviation mission to Panama was established in September 1949 as a result of the bilateral air agreement between the Republic of

Panama and the United States of America. The need for the establishment of the mission became urgent when Panama constructed a major international airport at Tocumen, 15 miles from Panama City, which removed all international air traffic from the United States military airport (Albrook Field) to the Panamanian airport.

The mission is a one-man operation and is staffed by a general consultant in the field of aeronautics. Other specialists in aeronautics have been sent to Panama from time to time. It also has been possible to profit from the advice of the Civil Aeronautics Administration communications personnel, located at the overseas radio station in Balboa. The major accomplishment of the mission has been to effect coordination between the Tocumen Airport staff (which operates the control tower), the Civil Aeronautics Administration (which operates the communication station), and the United States Air Force (which maintains air-traffic control and meteorological services).

Panamanian personnel have been trained locally and also have been recipients of scholarship grants to the United States for training in control-tower procedures and radio and teletype maintenance. Since the opening of Tocumen Airport as a major international terminal, the airlines have expressed their appreciation of its operation efficiency and have given a considerable amount of credit for this to the existence of the civil aviation mission.

Through this continuing program there is being developed a complement of highly competent technicians to staff Tocumen and other airports within the country.

3. Education

The Servicio Cooperativo Interamericano de Education (SCIDE) was established by an agreement between Panama and the United States of America on February 5, 1946, for the purpose of improving the educational institutions in Panama. The life of the servicio was extended each year from its inception until the basic agreement of 1950 extended its operations through 1955. This agency assists the Ministry of Education in a cooperative education program by promoting closer inter-American relations between the two countries through the interchange of educators, educational methods and ideas. Its operations are financed by a common fund established by both Governments, on a ratio of $3 provided by Panama for every dollar supplied by the United States of America.

During its first 2 years, the following projects were organized and developed:

a. Home economics: At the Escuela Normal "Juan D. Arosemena", in Santiago.

b. Visual aids: At the Escuela de Artes y Oficios, in Panama City.

c. Commercial education and domestic science: At the Escuela Profesional, in Panama City.

d. School planning: For the Escuela de Artes y Oficios, in Panama City.

e. Teacher training: In several schools throughout the Republic.

f. Seminars: For teachers during the summer periods.

Subsequent programs have been developed in industrial arts, vocational education, and in rural education.

Vocational education courses under the direction of SCIDE are carried on at the Instituto de Artes Mecanicas, in Divisa; Colegio Abel Bravo, in Colon; Colegio Felix Olivares, in David; and the Escuela de Artes y Oficios, in Panama City. The school in Divisa is a boarding-type school for boys. Its development began in April 1948, and its doors were formally opened on September 28 of that year. With an initial enrollment of 104 students in 6 courses of 3 years' duration, its curriculum consisted of auto mechanics, building construction, cabinet making, electricity, general mechanics, machine shop, and related subjects. The first graduates of this school are now gainfully employed.

Colegio Abel Bravo and Colegio Felix Olivares are comprehensive high schools in which departments of vocational education have been developed. The Escuela de Artes y Oficios is a vocational school in Panama City. Industrial arts courses are to begin in all these schools this year, and in eight other first cycle schools of the Republic in the near future.

A rural education project was initiated in January 1951, at the request of the Ministry of Education. In the short time of its operation it has made excellent progress. Specialists from both countries are working together in the development of programs in elementary, home life, agricultural, and manual arts education, as well as education in native industries. Teachers, pupils and their parents are taught the way to a better life in rural Panama, utilizing local foods and commodities as much as possible. Teachers, both in-service and preservice, are assisted in acquiring sound methods of teaching. Parents are taught better food habits, better health habits and community cooperation with the schools. Summarizing, the objectives of the rural education program are—

a. To reorient and train rural teachers already in service; to make their schools truly "community centered"; to interest the community in the improvement of the school program, and to make the school the means by which the community raises its standard of living.

b. To work with the normal (teacher training) school in the education of young Panamanians to be rural schoolteachers who will know the problems of rural communities and what the teacher and the school can do to make rural living happier and more productive.

Another activity of the cooperative education program has been to select outstanding Panamanian educators to be sent to the United States of America for special training in order to prepare them further for leadership in their fields. This has rendered considerable assistance in the improvement of the education system in Panama.

4. Public health and social service

The cooperative health and sanitation program of the Government of Panama and the Institute of Inter-American Affairs was carried on in a number of towns and cities from 1942 to 1946, with emphasis on malaria control and the construction of several miles of concrete drainage ditches. These are still being maintained in good condition.

In February 1951, a new agreement was signed between the Ministry of Labor, Social Welfare and Public Health, of Panama, and the Institute of Inter-American Affairs, authorizing the formation of the new Servicio Cooperative Interamericano de Salud Publica (SCISP). Since May of that year, technicians from the United States of America and their Panamanian associates have been working together on a series of projects within the framework of the SCISP.

A nationwide program of skin testing for tuberculosis and the vaccination with BCG of persons with negative reactions, is being carried out. A total of 40,738 tuberculin tests were given and 24,368 people were vaccinated by the end of May in Panama City, Chepo, Taboga, Otoque Occidente, Otoque Oriente, the Province of Chiriqui and on all the islands of the San Blas Archipelago.

Nursing consultation services are provided for the hospitals operated by the Government and for the school of nursing of the Santa Tomas Hospital. This program includes assistance in the organization and administration of hospital nursing services; the development of educational programs for professional nurses and for nonprofessional workers; and the improvement of the school of nursing with emphasis on the curriculum, teaching methods, standards for admission and for graduation, equipment, and clinical and school facilities. The objective is to insure better nursing care for the people of Panama.

A health education project designed to establish a comprehensive health education program within the Ministry of Labor, Social Welfare and Public Health, is an additional contribution made possible by these cooperative efforts between Panama and the United States of America.

A Panamanian technician is at present taking graduate work in public health education in the United States prior to assuming the direction of the Ministry's health education program. In the meantime, a SCISP consultant in health education is assisting in the formation of the Ministry's health education unit.

The engineering section is working in close cooperation with the section of sanitary engineering of the Ministry on the public health problems of the Republic. At present, plans are being prepared for a sewage plant for a new tuberculosis hospital, and a nationwide survey is being made to determine what other projects are needed and their priority.

Under the technical cooperation program, a consultant in social welfare from the United States Department of Health, Education, and Welfare has been cooperating with the University of Panama in making plans for expanding and reorganizing the school of social work. The school graduated its first class of eight students in March 1952, after a 5-year course under the leadership of a Panamanian specialist. These students will be assigned to towns and cities of Panama to work in the various programs that have been developed throughout the Republic.

Trained personnel is needed for social services in connection with health, social security, school programs, and for the care of abandoned, neglected, and delinquent children. According to an estimate by the United States consultant, there is need for at least 100 trained social workers in order to make the desired progress among the Panamanian people.

Qualified Panamanian personnel have been selected for United Nations and United States fellowships for advanced specialized training in health, social service, child welfare, and rural welfare service.

Technical cooperation in Panama

Fiscal years	United States funds [3]	Panama funds	Other funds [1]	United States personnel	Panama personnel
1942					
1943					
1944					
1945					
1946	$14,221.62	$10,000		1	1
1947	39,466.20	20,000		2	2
1948	70,537.02	20,000		5	2
1949	60,958.15	101,000		6	5
1950	78,091.24	128,000		8	7
1951	388,005.20	237,000	[1] $225,000	23	[2] 133
1952	1,206,452.86	350,000	385,000	31	163
1953	657,100.00	320,000	824,000	46	293
1954	1,287,700.00	310,000	971,000	47	366
Proposed, fiscal year 1955	1,066,400.00				

[1] Panamanian contributions to related activities in the agriculture program.
[2] Includes employees in Divisa schools of agriculture and extension technicians.
[3] Excepting 1953, 1954 and 1955, salaries are not included.

Technical cooperation in agriculture, Panama

Fiscal years	United States funds [3]	Panama funds	Other funds [1]	United States personnel	Panama personnel
1942					
1943	$15,508.00	(2)			
1944	150,323.00	(2)			
1945	103,124.00	(2)			
1946	(3)				
1947	(3)				
1948	(3)				
1949	(3)				
1950	(3)				
1951	190,960.00	$37,500	$225,000	8	94
1952	709,581.85	50,000	385,000	8	103
1953	203,400.00		824,000	15	[4] 320
1954	805,000.00	150,000	971,000	19	[4] 287
Proposed, fiscal year 1955	470,000.00				

[1] Panamanian contributions to related activities, such as Divisa Servicio Technical extension.
[2] Unavailable.
[3] Program not in existence from 1946 to 1950.
[4] Includes personnel working in direct relation with technical cooperation projects as well as personnel in corollary activities.
[5] Excepting 1953, 1954 and 1955, salaries are not included.

Technical cooperation in education, Panama

Fiscal year	United States funds [1]	Panama funds	Other funds	United States personnel	Panama personnel
1942					
1943					
1944					
1945					
1946	$14,221.62	$10,000		1	1
1947	39,360.20	20,000		2	2
1948	70,537.02	20,000		5	2
1949	60,958.15	101,000		6	5
1950	78,091.24	128,000		8	7
1951	146,574.99	150,000		11	16
1952	205,544.35	225,000		11	21
1953	191,400.00	150,000		13	36
1954	159,500.00	75,000		8	28
Proposed, fiscal year 1955	246,800.00				

[1] Except for 1953, 1954 and 1955, salaries are not included.

Technical cooperation in health and sanitation, Panama

Fiscal year	United States funds	Panama funds	Other funds	United States personnel	Panama personnel
1942					
1943					
1944					
1945					
1946					
1947					
1948					
1949					
1950					
1951	$74,470.29	$50,000		4	23
1952	152,828.75	75,000		6	35
1953	186,800.00	85,000		8	47
1954	208,700.00	85,000		10	40
Proposed, fiscal year 1955	229,000.00				

Technical cooperation in United States operation mission, Panama

Fiscal year	United States funds [1]	Panama funds	Other funds	United States personnel	Panama personnel
1942					
1943					
1944					
1945					
1946					
1947					
1948					
1949					
1950					
1951					
1952	$29,339.91			3	3
1953	86,951.30			6	6
1954	83,000.00			5	9

[1] Salaries are not included.

Technical cooperation in industry, Government and technical services,[1] *Panama*

Fiscal years	United States funds [2]	Panama funds	Other funds	United States personnel	Panama personnel
1942					
1943					
1944					
1945					
1946					
1947					
1948					
1949					
1950					
1951					
1952	$19,158.00			1	
1953	41,996.50			3	1
1954	92,000.00			5	1

[1] Includes fields of industry, labor, public administration, and civil aviation.
[2] Salaries are not included.

During the course of the ensuing 5 days, October 24 to October 28, inclusive, the study mission traveled north through Central America visiting Costa Rica, Nicaragua, Honduras, and San Salvador. While the time available for field study of projects was very limited due to the schedule, the study group did have opportunity to confer with United States Embassy personnel and to meet with interested national government representatives of the several republics cooperating in the technical cooperation program. In addition, meetings were held with groups of American business representatives, and their suggestions and opinions on current matters of interest to the United States and the countries in which they are resident were invited and obtained.

XVIII. COSTA RICA

A. SAN JOSE

In Costa Rica the study group was privileged to have a long conference with President Jose Figueres, recently elected Chief Executive of his country for a second time. The conversation on that occasion ranged across the entire spectrum of political and economic matters of mutual interest and concern to the United States and Costa Rica. While in San Jose the subcommittee was honored at a banquet given by the Legislative Assembly of Costa Rica. Following the dinner meeting, Mr. Jackson addressed his legislative counterparts on the community of interests between Costa Rica and the United States.

B. TECHNICAL COOPERATION

1. General objectives

The objectives of our programs in Costa Rica are, upon request, to help Costa Rica establish a more stable economy and higher standards of living through assistance in fields of genuine need. The policy in all cases is to help build local initiative and competence to a point where technical assistance can ultimately be withdrawn.

2. Agriculture and natural resources

The programs in this field may be summarized as follows:

(*a*) *Servicio Tecnico Interamericano de Cooperacion Agricola.*—(STICA)—Cooperative servicio (the major program): Costa Rica contributes (fiscal year 1953) $2.77 to $1 from United States. Approximately 285 local employees and 5 United States technicians. Has developed country-wide extension service (from 3 offices, 1948, to 30 offices, 1953) now 100 percent staffed by Costa Ricans. Estimate extension service will be turned over to Costa Rican Government in 1955. Program coordinated with Costa Rican Rural Credit and National Production Council (storage and prices for farm products) is key to change from imports to exports of basic foods. Advises farmers how to increase production at lower costs through mechanization, soil conservation, irrigation, drainage, better varieties, fertilization, insect and disease control, improved livestock and range management, etc. Contacts farmers, sons and daughters through youth clubs, and wives through home demonstration agents.

Sample statistics, 1952

Number of farmers requesting advice from STICA offices	84, 357
Number of farms visited by STICA agents	22, 396
Since 1948 erosion-control practices established on more than ....acres..	20, 000
Irrigation on .....do....	10, 000
Number of home gardens established	7, 877

(*b*) *Research.*—Technical assistance to Ministry of Agriculture in improving varieties and control of plant diseases, especially in coffee,

Two United States men now assigned to Costa Rica and one located here on regional basis.

(c) *United States Department of Agriculture Regional Rubber Experiment Station* (2 units).—Serving Latin American rubber producing countries. Producing disease-resistant, high-yielding trees for distribution. Technical advice to other countries through regional technicians. Estimate about 90 percent of benefits from this station accrue to other Latin American countries. Costa Rica provides land but no cash contributions (apparent local attitude that this program primarily for benefit of United States of America).

3. Health, welfare, and housing

Servicio Cooperative Interamericano de Salud Publica (SCISP)—Cooperative Servicio (initiated 1951): Costa Rica contributes (fiscal year 1953) $2.64 to $1 from United States. Main activities are manufacture and sale of sanitary privies and surface-drainage units (value of sales 1952, $31,943). Other activities include nurse training in cooperation with WHO; safe rural water supply systems; health education, emergency disease epidemic control, i. e., yellow fever; hospital architectural advice; training corps of sanitary engineers for Ministry of Health, etc.

4. Vital statistics

In June 1953, one United States technician completed 2 years work with the Ministry of Health, Social Security, and Census and Statistical Office, assisting Costa Rica to establish efficient vital-statistics system. This project is being furthered by two grants covering additional training in the United States of Costa Ricans employed in vital-statistics work.

5. Census and statistics

One United States technician assisted Costa Rica in 1950 agricultural census and establishment of Central Census and Statistical Office. This technician also served Nicaragua and Honduras at same time. Has just completed assignment. Costa Rica now capable of carrying on work on their own with occasional short-term assistance.

6. Public administration consultants

Two United States technicians are involved in this program. A reorganization study of garbage collection and disposal has been completed and is now being put into effect. Technical advice to new civil service commission in setting up and administering Costa Rican civil service system. Advice on reorganization of procurement department, Ministry of Health, is soon to be initiated. Official requests have been made for services of tax and tariff specialists. Technicians are being recruited for these projects.

7. Civil aviation

One United States technician for past year to assist with airport engineering. Responsible for direct saving of $1,800,000 through revision and change of plans for new international "El Coco" airport now under construction by Costa Rica. Present advice covers air traffic control and related problems. All local key civil aviation personnel trained by CAA.

8. Training

Forty-eight trainees in United States of America provided for in 1952 and 1953 program as follows:

Agriculture	15
Health	12
Vocational education	6
Transportation (CAA)	4
Public Administration	7
Surveys and mapping	3
Industry	1

Following trainees returned from United States of America since 1951 and occupy key positions in Costa Rican Government work:

Agricultural extension	7
Health	1
Civil aviation	6
Census	2
Total	16

XIX. NICARAGUA

The study mission arrived in Managua, Nicaragua, on Sunday, October 25, and immediately following arrival paid courtesy calls upon the Acting President, Anastasio Somoza, Jr., and Foreign Minister Oscar Sevilla-Sacasa. Following the courtesy calls, a press conference was held for the visiting group in the residence of United States Ambassador Thomas E. Whelan.

Technical cooperation in agriculture and natural resources, Nicaragua

Fiscal year	United States funds	Nicaraguan funds	Other funds	United States personnel	Nicaraguan personnel
1942					
1943					
1944					
1945					
1946					
1947					
1948					
1949					
1950					
1951		$43,253.89		3	13
1952	$160,000	82,980.97		9	24
1953	290,100	200,000.00		1	57
1954	319,100	230,000.00		15	89
Proposed, fiscal year 1955	306,000				

Technical cooperation in education, Nicaragua

Fiscal year	United States funds	Nicaraguan funds	Other funds	United States personnel	Nicaraguan personnel
1942					
1943					
1944					
1945					
1946					
1947					
1948					
1949					
1950					
1951	$85,000	$53,030.30		3	5
1952	50,000	53,030.30	$10,606.60	5	12
1953	137,100	75,757.57	39,694.60	7	15
1954	262,000	75,757.57	168,463.63	5	22
Proposed, fiscal year 1955	183,500				

The figures on Nicaraguan personnel on the program do not include laborers, carpenters, foremen, etc.
Contribution other than cash by the Nicaraguan Government, such as free duties, railroad, and other services amount to $55,656.43 as of September 30, 1953.
The fiscal year 1954 fund includes funds for the construction of 2 schools: $74,242.42 for the completion of the vocational school, and $60,606.06 to start the construction of the Normal Rural School at Esteli.

Technical cooperation in health and sanitation, Nicaragua

Fiscal year	United States funds	Nicaraguan funds	Other funds	United States personnel	Nicaraguan personnel
1942					
1943					
1944					
1945					
1946					
1947	$800,000.00	$150,000.00	$207,289.38		
1948					
1949					
1950					
1951	50,000.00	75,757.57		5	9
1952	100,000.00	151,515.15	84,090.91	5	15
1953	105,000.00	75,757.57	24,696.97	5	15
1954	196,900.00	75,757.57	250,000.00	4	14
Proposed, fiscal year 1955	132,500.00				

It must be noted that contribution other than cash by Nicaragua, such as free custom duties, railroad etc., are not included on the chart. The amount as of Sept. 30, 1953, was $74,170.11.

The figures on Nicaraguan personnel in the program do not include laborers, carpenters, foremen, etc.

XX. HONDURAS

The group departed for Tegucigalpa, Honduras, on October 26, and arrived on the morning of the same day. The usual courtesy calls were paid upon the President, Juan Manuel Galvez, and upon the Minister of Foreign Affairs, Edgardo Valenzuela. In the afternoon the group visited a new technical cooperation project, a tuberculosis sanitarium, which was started in June of 1948.

The technical assistance program in Honduras is a diversified one, and the most important aspects of it are set forth below.

A. HEALTH SERVICIO (SCISP)

Work has been carried out in four major fields of activity: Environmental sanitation, control of insect vectors of human diseases, TB sanatorium operation, and nursing. In the first category, 12 water and/or sewer systems were constructed and completed during the year at the following towns: Arada, Jesus de Otoro, Santa Ana, El Paraiso, Ojojona, Minas de Oro, Guinope, San Francisco de Lempira, Valle de Angeles, San Francisco del Valle and Alubaren. In addition, six more systems were under construction at the end of the year. In June 1953, a water plant operators course was given in Tegucigalpa, in collaboration with Pan American Sanitation Bureau (PASB) and the Honduran Department of Health, to train 17 water-plant operators from various Central American countries.

The TB program was highlighted by the inauguration, in May 1953, of a 200-bed annex to the sanatorium, which is operated by the *servicio*. Funds for the annex were provided entirely by the Honduran Government. This new structure more than doubles the capacity of the sanatorium, and makes available improved and enlarged facilities for the treatment of the disease, especially by surgical techniques.

The work in controlling insect vectors of human diseases continued evenly throughout the year. A total of 42,978 houses were sprayed with DDT during the year, bringing protection directly to 213,896 inhabitants. (Indirectly, the destruction of the mosquitoes and other insects would be beneficial to a great many additional persons.) A total of 40,720 net pounds of DDT were used in the year's work.

Activities of the nurse consultant were continued during the year. Special attention was paid to the organization of the nursing service at the TB sanatorium, to helping with nursing problems in the General Hospital (San Felipe) and in the hospital's polio ward, and with the organization and improvement of the school of nursing in Tegucigalpa.

B. AGRICULTURE SERVICIO (STICA)

Basic to the development of the agricultural program in Honduras is the building of an extension service as a means of contact with the individual farmers. Other technical branches of the program work through extension in contacting the farmer, and also may organize

separate activities less directly connected with the extension offices. Some of these are indicated below.

In the extension branch itself, 14 offices have now been established at key points throughout the country. Each one is staffed by an agent, usually a Honduran graduate of the agricultural school at Zamorano. Indicative of the scope of the activities of these agents is the fact that during 1953 they traveled over 113,000 kilometers by car and an additional 8,700 kilometers by horse or burro in the performance of their duties. Over 31,000 visitors were received in the extension offices, and a total of 72,000 contacts were made. More than 51,000 animals were sprayed and over 15,000 vaccinated. To introduce new products and equipment and create a market for agricultural materials, some $25,000 in sales was recorded by the extension offices during the year. As soon as the demand is established and private firms can be convinced of the desirability of handling the items, they will no longer be carried by the extension offices.

A 4–S Club organization was initiated during the year and, while new, the idea appears to be taking hold well and 42 clubs with some 850 members were started. A shipment of 200 pigs was received during the spring from the CROP organization in the United States. These pigs were distributed to interested 4–S Club members to help and stimulate the growth and improvement of hog raising in Honduras.

Five agricultural fairs were organized and held during the year at Tegucigalpa, Danli, Comayagua, Santa Rosa de Copan, and San Pedro Sula. They were organized and managed by the extension division, with cooperation from the Ministry of Agriculture, the Development Bank, and Livestock Growers Association.

A mobile motion picture sound truck was obtained and equipped to be ultimately turned over to the Ministry of Agriculture. While operating under *servicio* jurisdiction the last 4 months of fiscal 1953, some 21,000 persons attended the pictures shown.

The engineering division completed construction during the year, of the last 2 of the 3 major school building projects undertaken as a result of the point 4 program. The Rural Normal School for Girls was inaugurated in July 1952, and the Rural Normal School for Boys at Comayagua was inaugurated May 1953. These schools were 100 percent Honduran financed but were built by the agricultural *servicio*. Once completed, they will receive professional guidance from the education *servicio*. The third major school, the Vocational Agricultural School at Catacamas, was inaugurated in June 1952, but its first full year of operation began in fiscal year 1953.

The engineering division irrigated school lands at the Catacamas School and at the national demonstration farm at Comayagua. In this last place, some 1,300 acres of land have been brought under irrigation. The division has also worked extensively in bringing help to individual farmers in irrigation, farm planning, and contour arrangements, etc. The possibility of irrigation as a solution to the problem arising from the long dry season each year has been receiving more and more attention.

The national agricultural center at Comayagua was the focal point of considerable work during the year. Land was improved, fences repaired, irrigation developed, etc. Experimental plots were put in to various crops and additional lands were planted. Special emphasis at the center was livestock development. The herd which came with

the farm when it was turned over to the *servicio* 2 years ago has been substantially improved, with Red Poll and Criollo (native mixture) being the principal breeds. Improved feeding and care has resulted in steers that can be marketed in 2 to 3 years, instead of the 5 years required throughout the country. In the spring 41 carefully selected cattle were flown in from the United States to be used in crossbreeding and stock-improvement purposes. The adaptability of various breeds was also to be tested. Breeds brought in included Angus, Shorthorn, Holstein, Jersey, and Jersey-Sindhi. Four of the cattle died, but the others have made the adjustment to new conditions successfully and are developing satisfactorily.

The livestock program has been focused around the national demonstration center, mentioned above. However, considerable additional work has been undertaken to demonstrate spraying methods to cattle growers for use in the control of ticks and torsalo. Large-scale demonstrations have been given in San Pedro Sula, Jesus de Otoro, and Choluteca, with more than 6,000 cattle sprayed with encouraging results, both in benefit to the cattle and in interest on the part of the cattle growers.

A well-drilling program has been undertaken to provide water for livestock during the dry season. A number of dug wells have been made in the Choluteca region. Well-drilling equipment was ordered but since the program was not started until the spring of 1953 and the equipment did not arrive until June 1953, no special report of fiscal 1953 program can be made.

Of dramatic as well as practical importance was the campaign against a grasshopper infestation carried out in the summer and fall of 1952 and again in the spring and summer of 1953. Aided by a United States Air Force helicopter, the earlier campaign brought the grasshoppers under control, and it was estimated that the pests were not likely to return in the near future. They did reappear however, in an even larger area in the north coast region. An extensive ground fighting campaign was undertaken, and sizable quantities of insecticide have been utilized. The nature of the terrain makes the work especially difficult.

The forestry project has included a reforestation and planting program in the vicinity of Tegucigalpa, the development of plots in connection with the extension offices, and control of forest fires. An organization of fire guards, greatly assisted by the military, airlines, and local authorities, worked virtually night and day during the several critical months of the dry season. A sizable promotional and educational campaign was undertaken and signs urging the people to Protect Your Forests were seen everywhere. In spite of everything, forest fires did do considerable destruction this year, but it is believed the damage would have been much greater without the campaign. As of July 1, 1953, the forestry division, complete with personnel and equipment, was transferred to the Ministry of Agriculture, thus becoming the first agricultural activity to be officially turned over.

A farm machinery pool has been established, with funds furnished by the Ministry, to provide mechanical service to farmers for land clearing and other similar heavy-duty work. There is no commerical service of this kind available. So far, this has been carried out on a comparatively small scale as a pilot project. Ten units of equipment were included in this pool.

Experimental plots have been operated by the agronomy division in an effort to learn and demonstrate better and more profitable crop techniques. Seed selection has been carried out to help the Honduran farmers obtain and learn to know improved seeds. Near the end of the year arrangements for a soils-testing laboratory were being completed.

C. EDUCATION SERVICIO (SCIDE)

Work in this *servicio* has been divided into three general fields: normal training schools, inservice teacher training, and vocational agriculture.

In the first category, the two normal schools at Villa Ahumada and Comayagua were inaugurated during the year and the first classes started in the new buildings. As indicated above, these schools were built by the agriculture *servicio* and will receive professional guidance from the education *servicio*. These schools will have a capacity of approximately 200 students (at the present it is about 180, but plans are already made to increase the girls' school by 20 students), and after 3 years will be graduating some 60 or 65 trained teachers each year for the nation's rural education system.

The Agricultural School at Catacamas has operated successfully during the year (it was inaugurated in June 1952) under the direct management of the *servicio*. Work there during the year has included curriculum improvement, the strengthening of administration, and the development, including irrigation, of the school farm.

Inservice training has been carried on to reach rural teachers already employed in the schools. This has been done by workshops, a summer school for the teachers, and followup visits by the technicians in the schools. Efforts have been concentrated on five nuclear school systems, which cover 23 actual schools. Approximately 66 teachers have been directly reached in this manner, with an indirect influence in the communities which extends to a good many other persons.

Two demonstration schools, to accompany the normal schools, have been constructed during the year and put into service.

In the spring and summer of 1953 a vocational education survey was made. Considerable interest was found in Honduran officials and it is felt there are good prospects for a vocational education program in Honduras, although it must wait for additional funds from the National Legislature next winter. An arts and crafts school already exists and would provide the ideal foundation for such a program.

D. CENSUS AND STATISTICS

Work in this program has continued throughout the year. In January, the regional consultant, who came to Honduras about every third week, was reassigned and replaced by a permanent technician who spends full time in Honduras. One other regional consultant also works in the census program in Honduras. The main activity of the program has been the development of the agricultural census. The field count was made in the winter and spring of 1952 and the work since has been mainly in machine tabulations, and other activities necessary for publication of the data. The cartographic section of the

Honduran Census Department has been strengthened. It is felt that the Census work here has helped stimulate interest in this field, and was of significance in the appropriation by the National Legislature last winter of funds for a new census building in Tegucigalpa.

E. PUBLIC ROADS

The activities of the highway engineer consultant continued throughout the year in an area which is of extreme importance to the overall development of the country. Since the work is consultive in nature, it is difficult to point out specific accomplishments. However, there is no doubt but that the technician provided valuable service to the Honduran Highway Department in its rather ambitious public road program. Special attention has been paid to the development of the South Coast Road (Tegucigalpa to the Inter-American Highway near the Pacific coast). The consultant has been able to assist both in the engineering problems of construction and in the developing of contracts with private contracting firms.

F. CIVIL AVIATION

This program has been in Honduras about 7 months. Plans were worked out for an airfield survey and some aid provided in making plans for airport expansion and improvement. Considerable attention has been paid to a communications system and progress has been made in expanding and improving the system, both in the country and on an international basis. Help was also furnished in improving communications to give better service for the Honduran meteorological section.

G. TRAINING

The study mission was informed that there are no figures available at present regarding the local or on-the-job training. The following is therefore concerned with scholarship trainees sent to the United States or other countries.

At the beginning of fiscal 1953, there was a sizable backlog of fiscal 1952 trainees who were waiting final approval and reporting dates from Washington. Eighteen such trainees received their final awards during fiscal 1953 and started on their training. Several fiscal 1952 trainees were still pending at the end of fiscal 1953, but in every case those were substitutes for original candidates.

For the regular fiscal 1953 training program, applications for 26 candidates were submitted during the year, and as of June 30, 1953, 10 had already begun their training. Travel orders for several others had been received.

Following is a listing of the numbers of trainees, including those now in training and those still waiting final authorization from Washington, in each of the general fields of activity, for fiscal 1952 and 1953. (Fiscal 1952 includes only those departing in fiscal 1953 or still pending.)

Field of training	Fiscal 1952	Fiscal 1953
Census and statistics	1	4
General agriculture (engineering, agronomy, etc.)	9	1
Public administration	1	1
Hospital administration	2	
Veterinary medicine	1	
Nursing	1	1
Vocational education	4	
Education	1	2
Civil aviation	2	1
Inter-American Geodetic Survey School in Panama		7
Forestry		1
National income seminar, Chile		2
Highway engineering		2
Agricultural extension and program leaders		4
Total	22	26

H. CONTRIBUTIONS

United States contributions according to agreement (fiscal 1953):		
SCISP (health servicio)	US$100, 000. 00	
STICA (agriculture servicio)	150, 000. 00	
SCIDE (education servicio)	60, 000. 00	
Total, all United States contributions		US$310, 000. 00
Honduran contributions:		
STICA (agriculture servicio):		
According to agreement	US$300, 000. 00	
Over agreement in cash	324, 359. 70	
Indirect	28, 475. 26	
Total		652, 834. 96
SCIDE (education servicio):		
According to agreement	US$60, 000. 00	
Over agreement in cash	81, 816. 00	
Indirect	7, 831. 50	
Total		149, 647. 50
SCISP (health servicio):		
According to agreement	US$503, 200. 00	
Over agreement in cash	199, 254. 28	
Over agreement in kind	23, 742. 75	
Indirect contributions	27, 123. 79	
Total		753, 320. 82
Civil aviation program		1, 000. 00
Development bank, special training contribution		4, 375. 00
Total, all Honduran contributions		US$1, 562, 178. 28

I. STATISTICAL ANALYSIS OF PROJECTS

1. *Health servicio (SCISP)—Servicio Cooperativo Interamericano de Salud Publica*

In operation 11 years and 3 months.

Employees:

United States	4
Local IIAA	5
Servicio	128
Local day labor	541

Contributions up to October 1, 1953:

United States	$1, 175, 000
Honduras (includes contributions according to agreement, special contributions, contributions in kind, and indirect contributions)	3, 819, 260

2. Agriculture Servicio (STICA)—Servicio Técnico Interamericano de Cooperación Agrícola

In operation 2 years and 9 months.

Employees:

United States	11
Local IIAA	3
Servicio	287

Contributions, up to Oct. 1, 1953:

United States	$350,000
Honduras	1,228,628

3. Education Servicio (SCIDE)—Servicio Cooperativo Interamericano de Educacion

In operation 2 years and 6 months.

Employees:

United States	8
Local IIAA	2
Servicio	25

Contributions to Oct. 1, 1953:

United States	$151,400
Honduras	288,245

4. Consultant or advisory programs (nonservicio)

Civil aviation: In operation about 1 year; 1 United States employee.

Public roads: In operation 2 years and 6 months; 1 United States employee.

Census and statistics: In operation 3 years; 2 United States employees.

Contributions to joint funds for servicio operations in Honduras

Fiscal year 1953:	
Health Servicio (SCISP):	
United States	$100,000
Honduras	753,320
Agriculture Servicio (STICA):	
United States	150,000
Honduras	652,834
Education Servicio (SCIDE):	
United States	60,000
Honduras	149,647
Fiscal year 1954 (to Oct. 1, 1953):	
Health Servicio (SCISP):	
United States	----
Honduras	87,499
Agriculture Servicio (STICA):	
United States	----
Honduras	175,000
Education Servicio (SCIDE):	
United States	----
Honduras	----
Total (for total operating life of each servicio):	
Health Servicio (SCISP):	
United States	1,175,000
Honduras	3,819,260
Agriculture Servicio (STICA):	
United States	350,000
Honduras	1,228,628
Education Servicio (SCIDE):	
United States	151,400
Honduras	288,245

Technical cooperation program for Honduras

	United States funds	Honduras funds	Other funds	United States personnel	Honduras personnel
Calendar year—					
1942				3	36
1943	$500,000			4	609
1944				4	742
1945				8	452
1946	300,000	$300,000		5	368
1947				5	547
1948	25,000	676,492		3	409
1949	50,000	250,000		3	191
1950	50,000	274,099		3	315
1951	152,234	718,284		11	583
1952	319,166	1,186,460	$5,010	23	524
1953	310,000	1,647,871	2,014	27	744
1954	310,000	2,011,000		27	860
Proposed, fiscal year 1955	917,600				

Technical cooperation in highway development, Honduras

Year	United States funds	Honduras funds	Other funds	United States personnel	Honduras personnel
1951				1	(1)
1952	$10,400			1	
1953	7,900			1	
1954	19,100			1	

[1] The United States technician serves as consultant on highway construction, and as such he works closely with the department of public highways, 1 of the major activities of the Government which includes hundreds of engineers and other technicians and thousands of laborers. It is not considered reasonable, however, to give any specific numbers as part of a program.

Technical cooperation in agriculture, Honduras

	United States funds	Honduras funds	Other funds	United States personnel	Honduras personnel
Calendar year—					
1951	$50,000	142,766.50		5	39
1952	150,000	440,896.17	5,010.50	10	75
1953	150,000	694,064.59	2,014.60	11	131
1954	150,000	700,000.00		10	155
Proposed, fiscal year 1955	419,600				

Technical cooperation in education, Honduras

	United States funds	Honduras funds	Other funds	United States personnel	Honduras personnel
Calendar year—					
1951	$52,234	$61,400.00		1	10
1952	69,166	142,729.15		6	25
1953	60,000	118,971.82		8	33
1954	60,000	160,000.00		8	35
Proposed, fiscal year 1955	180,800				

Technical cooperation in health and sanitation, Honduras

	United States funds	Honduras funds	Other funds	United States personnel	Honduras personnel
Calendar year—					
1942				3	38
1943	500,000			4	609
1944				4	742
1945				8	452
1946	300,000	300,000.00		5	368
1947				5	547
1948	25,000	676,492.21		3	409
1949	50,000	250,000.00		3	191
1950	50,000	274,099.98		3	315
1951	50,000	514,118.53		3	484
1952	100,000	602,834.37		2	374
1953	100,000	833,836.65		2	480
Eiscal 1954	282,000	1,150,000.00		3	600
Proposed, fiscal year 1955	197,100				

Technical cooperation in civil aviation, Honduras

	United States funds	Honduras funds	Other funds	United States personnel	Honduras personnel
Calendar year—					
1953	$12,400	1,000		1	(1)
1954	37,200	1,000		1	

[1] The CAA technician serves as consultant to the Honduran Government's Division of Civil Aeronautics, and indirectly provides assistance to the local and international airlines. Direct work relations are established with perhaps some 50 persons, mostly in the technician category, but actually a great many more persons are affected by this program.

Technical cooperation in census and statistics, Honduras

	United States funds	Honduran funds	Other funds	United States personnel	Honduran personnel
Calendar year—					
1951				1	50
1952	$11,500			2	50
1953	2,600			2	100
1954	19,300			2	70

XXI. EL SALVADOR

The study group arrived in El Salvador on the morning of October 27 and departed the Republic on October 28. In spite of the limited time available for field study of projects, a full schedule of activity was laid out for the group.

On arrival, the study mission was accorded the kind welcoming courtesies which had marked every stop in the Republics and through the Carribean area. United States Ambassador Michael J. McDermott and members of his staff were at the airport when the group arrived, as were representatives of the El Salvador executive and legislative branches of Government. A press conference was held at the airport before the group proceeded into the capital city of San Salvador. Following luncheon the group was briefed on all phases of United States-El Salvador relations and the party, in company with United States and national technicians, departed for Centro Nacional de Agronomia, the activities of which include many of the technical cooperation projects in agriculture.

El Salvador has received a substantial amount of technical assistance for so small a country. Several reasons were advanced to the study mission for this fact. The Government has welcomed the proffered cooperation and has extended every aid and assistance in the planning and development of needed projects. Excellent opportunities exist in El Salvador for the beneficial utilization of program funds, and in so small a country the results of projects are more immediately apparent than in a Republic where the program is of necessity widespread and projects difficult of access.

The people of El Salvador have had a unique opportunity to watch the technical cooperation program in action, and the subcommittee gained an impression that the program in this small sister Republic was a model of its kind.

In fiscal year 1953 the United States contribution for technical assistance was $628,100; that of the Salvadoran Government, $1,100,000. There were approximately 30 United States technicians in El Salvador, engaged in the following types of programs: Agriculture, forestry, and fisheries (13 technicians); health and sanitation (10); education (1); industry and labor (5); and public administration (1). There were 15 training awards made to Salvadorans.

Most of the technical cooperation agricultural work was done through the Centro Nacional de Agronomia, which by research and demonstration strives to increase and diversify production of commodities and conserve natural resources. The value of the assistance provided is clear, although measurement of results is difficult in one of the most important fields, that of extension work with small farmers.

Major objectives of health, welfare, and housing are to train professional and technical personnel in the basic fields of public health; to increase the construction of health centers, hospitals, water and

sewer systems, and sanitary public markets, and to raise the level of personal health practices throughout the country.

The vocational education program seeks to build up a supply of skilled workmen; and the programs of industry, labor, and public administration are designed to assist the Government of El Salvador in planning and carrying out its policy for economic development and industrialization and for developing sound administrative practices and machinery to this end.

The technical cooperation in El Salvador was commenced over 10 years ago and, to the time of the visit by the study mission, no project has failed to produce the results expected when it was instituted. An unusual aspect of technical cooperation in El Salvador is the issuance of a farm paper, widely distributed and read throughout the country. Home economics, animal husbandry, 4–H Club work, soil conservation, a county agent system and other related agricultural activities combine in El Salvador to compile a well-rounded and integrated program in that area. At the time of the visit by the study mission there were 550 farm projects operating in the extension service, requiring the services of 7 agents. It is expected that full responsibility for all technical cooperation agricultural activities in the Republic will be turned over to that Government this year, and that only those United States nationals considered necessary in supervisional capacities will be retained in the country for an additional and stipulated period.

County agents have been trained and are at work in 18 departments of the Republic. It is anticipated that 32 departments will have the services of full-time agents before the end of 1954. While most of the agents have received their training under the technical assistance program in El Salvador, some have been sent on scholarships to the United States for advanced work.

Tuna rice was introduced in El Salvador 5 years ago as a technical cooperation program designed to increase the production of that major subsistence item and obviate the necessity for imports for domestic use. Today El Salvador exports a surplus over and above the requirements of its own people. By the use of this new strain and by proper fertilization, the increased yield is produced on the same acreage previously under cultivation, an important factor in a small country with a large population.

The growth of sugarcane has been revived under the technical assistance program and in 1953, 6,000 tons of plants were distributed to small farm operators. As a result of the cane program, the import of sugar is no longer necessary.

The study mission found the agricultural central to be a modern and interesting operation. Here as elsewhere the group was impressed by the enthusiasm and the cooperation demonstrated by the nationals of El Salvador in their contacts and work with the United States technicians.

Technical cooperation in health, welfare and housing, El Salvador

Year	United States funds	El Salvador funds	Other funds	United States personnel [1]	El Salvador personnel
1942—July 2	$500,000		$151,111.87	1 (½)	
1943				14 (5½)	
1944—Apr. 11				13 (8)	593
1945	300,000	$300,000	222,921.28	14 (5⅔)	
1946				9 (5¾)	379
1947	50,000	330,000	76,569.05	4 (3)	629
1948—June 30				5 (3⅓)	495
Fiscal year:					
1949	25,000	125,000	47,586.02	6 (5)	261
1950	50,000	370,000	18,349.07	11 (3½)	221
1951	40,000	302,000	206,967.00	7 (5)	372
Calendar year:					
1952	40,000	200,000	90,790.00	11 (6)	386
1953	108,400	268,400	735,090.29	13 (9⅚)	353
1954	40,000	200,000	50,000.00	12 (10)	300
Proposed, fiscal year 1955	264,800				

[1] In parenthesis is shown man-years.

Technical cooperation in agriculture and natural resources, El Salvador

	United States funds	El Salvador funds	Other funds	United States personnel	El Salvador personnel
Calendar year—					
1942	$25,000	$11,624			
1943	31,000	55,536			
1944	24,500	42,048			
1945	51,000	391,556	$7,500		
1946	83,000	98,656	8,000		
1947	73,000	221,976	8,200	[1] 6	[1] 150
1948	68,000	334,480	8,500		
1949	75,000	162,840	9,000		
1950	90,000	171,768	9,500		
1951	94,846	491,368			
1952	125,000	710,400		11	158
1953	186,600	[2] 790,000		11	201
1954	285,600	[2] 1,720,000		15	350
Proposed, fiscal year 1955	286,300				

[1] Average.
[2] These 2 figures are approximate.

Technical cooperation in education, El Salvador

	United States funds	El Salvador funds	Other funds	United States personnel	El Salvador personnel
Calendar year—					
1945	$122,900	$82,000		3	7
1946					
1947					
1948					
1949					
1950					
1951	22,900	2,000		1	2
1952					
1953	16,000	1,080		1	
1954	69,000	1,080		5	8
Proposed, fiscal year 1955	111,300				

Technical cooperation in fisheries, El Salvador

	United States funds	El Salvador funds	Other funds	United States personnel	El Salvador personnel
Calendar year—					
1952	$23,000	$117,000	$35,000	3	8
1953	20,000	90,000		3	8
1954	22,000	100,000		2	10

Technical cooperation in public administration, El Salvador

Year	United States funds	El Salvador funds	Other funds	United States personnel [1]	El Salvador personnel
Calendar year—					
1945					
1946					
1947					
1948	[1] $20,000	[1] $560,000		3	320
1949					
1950					
1951					
1952	8,750	23,110		1	112
1953	34,100			2	
1954	69,400			2	
Proposed, fiscal year 1955	59,000				

[1] Approximate figures (CAA, census and statistical fields).

Technical cooperation in labor standards, El Salvador

Year	United States funds	El Salvador funds	Other funds	United States personnel	El Salvador personnel
Calendar year—					
1953	$8,200	$1,800		1	3
1954	16,700	1,800		1	4

XXII. MEXICO

A. COMPLETION OF STUDY MISSION

From San Salvador, El Salvador, the study mission proceeded to Merida, capital of Yucatan, Mexico, where the group was honored by the Yucatan Legislative Council in the legislative palace shortly after its arrival.

The study mission held discussions in Mexico City with United States Ambassador Francis White and members of the Embassy staff, and with Mexican officials.

Conversations were ended on November 4, 1953, at which time the study mission officially completed its assignment, having covered more than 17,000 miles, visiting all of the countries in Latin America with the exception of Guatemala, Paraguay, and Venezuela.

B. TECHNICAL COOPERATION

The technical cooperation program in Mexico is not extensive, although all of the reports received by the study mission indicated that the fullest possible measure of cooperation is being accorded to the program by the Mexican Government and the several ministries involved.

The basic objective of the technical cooperation program in Mexico is to assist the Government of Mexico to achieve a balanced economy and higher living standards for its people. To do this, the program envisages industrial development and expansion, particularly in small industries; improvement and expansion of mining and agricultural production, transportation and communication facilities; training and utilization of the large labor force; and measures to protect the people from the ravages of disease.

The Mexican Government has indicated its interest in, and its wish to continue and expand, the technical cooperation program in Mexico. It appreciates the achievements of the program evident up to this time, and has indicated its interest in new projects. However, the Mexican Government does not look with favor upon projects and programs which call for United States participation in their control and management. The result of this understandable attitude seems apparent that the role of United States technicians in the future may be most effective in a majority of cases by only serving in a capacity of appraising the feasibility of the Mexican program and in providing for consultation.

The general technical cooperation agreement with Mexico was not signed until June 1951, but a number of programs had been in operation for many years, having been initiated under antecedent organizations. The two countries have been cooperating on mining and geological research since 1940. Among the mineral deposits studied are antimony, barite, coal, copper, fluorite, lead, manganese, mercury, optical calcite, tin, tungsten, and zinc. United States assistance in

this program has been confined to field and laboratory work, the training of Mexicans in the United States and in Mexico, and publications.

Since 1941, the United States Bureau of Plant Industry has had a small rubber mission in Mexico. The mission has served in an advisory and assistance capacity in the establishment, operation, and management of rubber plantations, and in rubber-disease control.

A fisheries advisory mission was established in 1942 to investigate and develop the country's marine and inland fishery resources. Lately this has been expanded to include oysters and shrimps.

The health and sanitation program began in 1943 under the Institute of Inter-American Affairs. Its aim is to give technical assistance and stimulate new phases of public-health activities in Mexico. In 1947, the agreement was amended so that the Dirección de Cooperación Interamericana de Salubridad Pública (DCISP) set up in 1943, besides continuing to cooperate with the Ministry of Public Health and Welfare, would cooperate also with the Ministry of Hydraulic Resources in matters pertaining to sanitary engineering such as water-supply and sewage-disposal problems.

Since its inception in 1943, the DCISP has cooperated in the design and construction of potable water-supply systems, sewage systems, and in the installation of chlorinators for water systems, and has given technical assistance on related problems. An active campaign has been waged against tuberculosis, typhus, malaria, and venereal diseases. Health centers have been designed and constructed in various parts of the country and equipment and instruments provided for various public-health institutions. It has stimulated and increased public-health education, training of professional public-health personnel, and research and study of tropical and other diseases.

Other programs and projects include social welfare, public administration, industry and labor, and transportation.

Mexico's contribution to all programs for fiscal year 1952 was approximately $585,000, while the United States contributed $662,376. In addition to cash, Mexico contributes in kind such as land, buildings, office space and facilities, local travel and personnel aid. The United States program cost for fiscal year 1953 was $625,400, Mexico's approximately $702,100; for fiscal year 1954 the United States cost was $998,300; Mexico's estimated contribution was $1,617,000. And for fiscal year 1955, the programs proposed by the executive branch total $1,041,200.

SUMMARY AND RECOMMENDATIONS

In summing up the impressions gathered by the House Foreign Affairs Committee special study mission to Latin America, there is an instinctive urge to give unqualified approval to the work presently being done in that important area through the medium of technical cooperation. In light of the unfailing courtesy and cooperation of United States diplomatic representatives and officials of the several Republics visited, by virtue of the obvious enthusiasm of those with whom we came in contact in this area of United States foreign policy, and for other reasons too numerous to detail here, the natural instinct is to pay a "well done" to all concerned and give blanket approval to every administrative phase of the work and to all of the programs and projects currently in effect.

Friendship, hospitality, and cordiality, however, serve to lay a poor foundation for critical analysis. Nevertheless, the study mission is under a charge to report frankly to the Congress the facts of the matters under study, even though some statements contained in such a report may appear poor reward for many kindnesses and courtesies extended to the study mission in every country visited. It is hoped that the critical portions of this report will be accepted in the spirit in which they are made, and that recognition will be accorded the legislative responsibility involved.

In general, it can be said that technical cooperation is producing satisfactory results throughout Latin America. If the rise of communism and other totalitarian philosophies is to be avoided, and the processes of representative and honest government are to gain the ascendency through this important area of the world, it is essential that the general economic level be raised and that hunger and disease be reduced to a point where rational and healthy men and women can hear the measured tones of reason above the strident and challenging voices of violence and hatred. It must be stated in all honesty that this goal is not presently in sight throughout most of Latin America. A population of millions exists on a day-to-day subsistence basis, with no certainty as to the future. Some suffer the bitter and constant chill of the highlands and some the fevers of the jungle. Others, in stark isolation, are as far removed from their fellow nationals a few miles away as are inhabitants of different countries. The one-commodity nations are so completely dependent upon their single crop as to render their economies entirely at the mercy of weather and the vagaries of world market prices. Yet there exists in several of the Republics a reluctance to explore other channels for the diversification of agriculture or for the orderly and vital development of the tremendous and hidden resources of a great continent.

Latin America requires capital investment from foreign sources, but a supranationalist spirit in some countries has all but dried up the sources of money from abroad. There is a latent suspicion of United States intent, and a reluctance in some instances to admit to a need for capital investment. In other cases, governments are willing to

deal only on a government-to-government loan or grant basis, irrespective of the availability of foreign or domestic capital to make long-range and honest investment if given adequate guaranties against confiscation, tax discrimination, and executive interference.

The funds allotted to the technical cooperation program in Latin America can make a significant contribution to the welfare and the safety of the peoples of the hemisphere, but if the program is designed to be the only continuing defense against the inroads of totalitarianism, we shall lose the battle. Technical cooperation is a long-range program, the ultimate goals of which will, when achieved, improve agriculture and public health, and bring to millions of our neighbors the benefits of modern education. But Red aggression will not and is not waiting the promise of the future. Its agents are working around the clock to insure not only the frustration of United States efforts in the field of technical cooperation, but the discrediting of all United States aims, no matter how worthy or essential. Their major efforts are directed to preventing the influx of capital investment from abroad which might be expected to increase production, stimulate commerce and generally bring to Latin America the economic benefits and advantages which have become a part of life in the United States and Canada.

Fortunately, some farsighted and able men in several of the Republics realize that in the development of industry and commerce lies the future of Latin America. Several significant steps have been taken in these Republics to ease unreasonable bans on foreign investment and to create the climate necessary to induce substantial investments from abroad. In this connection it should be apparent that a great weight of responsibility rests on foreign capital to deal honestly and wisely with the Republics which are modifying their laws and regulations to render possible the new investments. Any evidence of rapacity, any indication of social or economic discrimination, will lead, and should lead, to the erection of new and formidable barriers to economic cooperation.

North, Central, and South America are in large part noncompetitive. Latin America is our best customer and upon that area we are dependent for many of the commodities essential to our own national well-being. Tariff discrimination between agricultural Latin America and industrial North America can only result in retaliatory measures on the part of each, which neither can afford.

It must be made abundantly clear to our friends and neighbors that neither technical assistance nor the funds of the Export-Import Bank are to be substituted for private capital investment when such financing is available. Technical assistance was designed to do those things and offer such technical cooperation as was found impractical or unavailable from private sources. The United States Government represents a people whose economic and social greatness stems from the orderly and lawful conduct of private enterprise, and it should not be in the business of promoting or forwarding the aims and purposes of the socialist state. Where capital, domestic or foreign, is available for the development of any program or project, it is the opinion of the undersigned that no loan or grant of United States funds is proper or was ever intended by the Congress of the United States. The fact that a foreign government is reluctant or unwilling to permit negotiations or the conclusions of agreements or contracts

between individual citizens or corporate entities in the two countries concerned has too often been advanced by our own Government in the past as adequate grounds for the granting of assistance to the other nation.

Obviously there are areas in which loans and grants can be effected and advantageously utilized only at the government-to-government level. In matters affecting national defense, education, public health and sanitation, agriculture, public administration, etc., there is no incentive for the investment of private capital, and in these areas the program of technical cooperation can make and is making a considerable and significant contribution through intergovernmental cooperation. However, in the development of any program or project, the Foreign Operations Administration (FOA) should make the availability of private financing the yardstick of approval, and reject any and all proposals which do not meet that test.

Admittedly, this course of action will not be universally popular throughout Latin America, and it can be anticipated that strong protest will meet any such suggestion in many quarters. But strengthened trade and increased opportunities for development have traditionally grown out of the industry and incentive displayed by a nation's citizens and not from the inarticulate and bureaucratic forces of government. People, when left to their own devices, within the framework of reasonable and equitable laws, will always choose courses of action in commerce and industry designed to increase and expand the areas in which their efforts are expended. A free and untrammeled flow of private capital internationally is the best guaranty that the nationals of all countries will strive to create the additional productive capacity necessary to a strong and viable internal economy. The problems which harass and perplex Latin America are not those which can be met and dissipated at the level of government, which is in no way qualified to explore, develop, stimulate, produce or compete in the world market. Government can and does consume, but it produces little and it makes small contribution to the economic well-being of its citizens where it feeds, houses, and clothes them with one hand, while holding back with the other the very economic instruments which would serve, if permitted, to set in motion the wheels of industry and commerce.

It is not unreasonable to assume that Latin America possesses potential wealth equal to or greater than that which has been exploited and developed here in the United States for the benefit of our people. The orderly and scientific development of petroleum alone throughout the hemisphere could be the Midas touch on the shaky economies of a dozen countries throughout the hemisphere, lands which not only suffer from a chronic and unfavorable trade balance, but from a resultant and continuing deficit in dollar balance. Oil in the ground feeds no empty bellies, and it is questionable whether sufficient satisfaction can be derived from the certain knowledge of its presence to alleviate cold and disease among a population.

The study mission was informed of one instance in which a technical cooperation program in one of the Latin-American countries had led, in due course, to a decision to embark upon a new and greatly expanded program requiring the expenditure of a considerable sum of money. It appears that negotiations for a capital development loan took place in Europe, and were carried through to a successful conclusion.

However, one of the conditions attending the loan was that the contracts for construction of needed facilities must be performed by contracting firms operating within the nation with whom the loan had been negotiated. While it is obviously not the intention of the technical cooperation program to preclude legitimate competition, it is equally obvious that where projects develop to the stage where further capitalization is required, the United States contractors should not be excluded from entering bids for the work to be done. It is recommended by the study mission that basic program agreements entered into between the United States and a cooperating Republic be so phrased as to insure that equal opportunities are afforded to United States nationals and to all others in the matter of entering bids for contracts.

As has been heretofore mentioned on several occasions, the study mission was impressed with the progress being made in the mutual self-help housing projects. This program, requiring the individual who is subsequently to live in a house under construction to lend his personal efforts to the building of the structure, is, in the mission's opinion, designed to increase self-respect, and to spur the individual initiative of those participating in the program. While the program, as presently carried on in some of the Caribbean Islands and in Surinam, is peculiarly designed to meet conditions existing in those areas, it is believed by the study mission that the plan might be modified to fit existing social and economic circumstances in some of the outlying possessions of the United States.

One of the most important considerations in connection with the technical cooperation program is the determination when the time has arrived for a given project to be turned over in its entirety for operation by the host government. This is a perplexing problem and one which is appreciated by the study mission. The intent of the Congress in passing the basic legislation providing for the technical cooperation program was that United States participation in projects should be reduced year after year, both as to financial contributions and employment of United States personnel. In general, this legislative intent has been carried out, although the study mission visited several projects where the United States technicians, through no fault of their own, had been unable to develop the project to a point where it was considered feasible and desirable to relinquish all United States participation. Each of the many projects differs from the others, and it is almost impossible to develop a set of criteria that can be used to fix in advance an appropriate time for the conclusion of United States participation. The problem is a fundamental one, and one deserving of the closest scrutiny by those responsible for the administration of the technical cooperation program. There appears to be a reluctance in some countries to turn over a project and withdraw from active participation. In other instances there is reason to believe that projects were turned over to the local government for operation before they had reached a stage of development that fully justified the move. The study mission is confident that the matter is being studied carefully at the present time, and it is hoped that some determination can be made which will act as a general guide for those who are charged with the field work. This comment is made with a full understanding of the many complex problems involved, and the

number of imponderables which cannot be accurately assessed until a given project has been in operation for a considerable period of time.

The economic and sociological conditions obtaining in each of the several Republics render it extremely difficult, if not impossible, to cut a measure for all of Latin America from a single pattern. Each of the Republics has its own unique problems and opportunities. It should be stressed, however, that a considerable health and sanitation project, while meritorious in its concept and implementation, may actually create an imbalance in the economy of the country if those who are cured of endemic disease are not, upon recovery, enabled to engage in an occupation or profession. Thus it is that in such a country an agricultural program is a necessary counterpart of the health program. The maintenance of natural balance is an important aspect to the technical cooperation program, and the study mission assumes that continuing study is being given to this aspect of the overall program.

While the matter of diplomatic mission personnel was outside the scope of the subcommittee's studies, there were several instances where it was a matter of discussion. One such instance was Haiti, where an evident need exists at the present time for a naval attaché. Port-au-Prince is a regular port of call for American warships, and the problems growing out of these visits cannot adequately be handled, in the opinion of the study mission, by regular personnel presently assigned to the United States Embassy. It is not unusual for hundreds of United States sailors to be in Port-au-Prince on liberty parties and, in addition to the problems created thereby, there is a multitude of other and corollary perplexities having to do with recreational facilities, policing, and entertainment. It is recommended that consideration be given to the designation of a naval attaché to the United States Embassy in Port-au-Prince, Haiti.

Panama is another of the Republics where an unusual situation obtains with respect to personnel in the Embassy. Located as it is, Panama is transited by hundreds of visitors every year. Many of those going to or through the Republic of Panama are officials of the United States Government or Members of the United States Congress. Plane arrivals and departures are frequently late at night or very early in the morning, and unusual demands are constantly being made on the regular Embassy personnel in this regard. When the study mission departed from Panama, the Ambassador had to get up at 4 a. m., in order to see the Mission off. At a subsequent time an Embassy attaché was required to meet the Mission on its arrival at Panama at 1 a. m., and when it departed a Foreign Service officer was required to absent himself from his regular duties for a considerable period of time. The unusual circumstances brought about by the disproportionate number of visitors to Panama would appear to justify the addition of personnel who would not otherwise be required in a post of the size maintained by the United States in Panama City. It is recommended that study be given this problem by the Department of State, and that the unusual circumstances obtaining in the Republic be considered.

DONALD L. JACKSON,
Chairman, Subcommittee on Inter-American Affairs and Special Study Mission to Latin America on Technical Cooperation.

APPENDIXES

APPENDIX A

Itinerary of special study mission to Latin America on technical cooperation, Sept. 15 to Nov. 4, 1953

Date	Leave		Arrive	
	City	Time	City	Time
Sept. 15	Miami	0800	Habana	0915
18	Habana	0800	Santiago de Cuba	1125
19	Santiago de Cuba	1200	Port-au-Prince	1550
21	Port-au-Prince	0930	Ciudad Trujillo	1030
23	Ciudad Trujillo	0930	San Juan	1100
25	San Juan	0930	Port of Spain	1250
26	Port of Spain	1200	Georgetown	1315
27	Georgetown	1200	Paramaribo	1310
29	Paramaribo	0930	Cayenne	1040
30	Cayenne	0600	Belem, Brazil	0804
Oct. 2	Belem	0510	Rio de Janeiro	1100
4	Rio de Janeiro	1200	Sao Paulo [1]	1305
6	Rio de Janeiro	1055	Montevideo	1500
7	Montevideo	1610	Buenos Aires	1705
9	Buenos Aires	1045	Santiago	1255
11	Santiago	1335	Lima	1830
13	Lima	0730	La Paz	1315
15	La Paz	1110	Lima	1455
17	Lima	0715	Quito	1300
19	Quito	1150	Cali, Colombia	1345
19	Cali	1550	Bogotá	1700
21	Bogotá	0640	Panama	1100
24	Panama	0600	San Jose	0705
25	San Jose	0730	Managua	0850
26	Managua	0910	Tegucigalpa	1015
27	Tegucigalpa	1030	San Salvador	1120
28	San Salvador	1215	Guatemala City [2]	1300
28	Guatemala City	1510	Merida, Mexico	1705
30	Merida	1450	Mexico City	1711

[1] Returned to Rio de Janeiro same day.
[2] One-half hour stopover only.

APPENDIX B

Value of United States direct private investments in Latin America, capital movements and undistributed subsidiary earnings, by area and industry, 1949–52[1]

[Millions of dollars; deduction of investment (−)]

Area and additions to value	All industries			Agriculture			Mining and smelting			Petroleum		
	1950	1951	1952	1950	1951	1952	1950	1951	1952	1950	1951	1952
Latin American Republics:												
Value at beginning of year	4,590	4,735	5,176	513	520	557	595	628	736	1,467	1,408	1,408
Net capital movements	40	165	277	−7	22	−4	29	60	120	−69	−75	32
Undistributed subsidiary earnings	109	249	303	14	15	11	4	16	15	14	82	135
Other changes	−4	27	2					32		−4	−7	2
Value at end of year	4,735	5,176	5,758	520	557	564	628	736	871	1,408	1,408	1,577

Area and additions to value	Manufacturing			Public utilities			Trade			Miscellaneous		
	1950	1951	1952	1950	1951	1952	1950	1951	1952	1950	1951	1952
Latin American Republics:												
Value at beginning of year	667	780	992	1,035	1,041	1,044	212	242	303	102	116	136
Net capital movements	64	116	80	−3	−7	21	18	38	11	7	11	18
Undistributed subsidiary earnings	49	96	94	9	10	11	12	23	30	7	7	8
Other changes											2	
Value at end of year	780	992	1,166	1,041	1,044	1,076	242	303	344	116	136	162

[1] Source: U. S. Department of Commerce, Office of Business Economics.

Among the countries of Latin America, there was a particularly sharp change in manufacturing investments in Mexico, with a number of important enterprises withdrawing funds in 1952 and also in 1953, possibly reflecting a slackened rate of increase in industrial production in Mexico in this period. In Brazil, on the other hand, manufacturing capital entered at a high rate in 1951 and 1952 as industrial production mounted. To some extent this new investment may have resulted from the blocking of dollar payments due to the parent companies by Brazil, and 1953 investments in this country appear to be substantially smaller. The reduction in the capital flowing to Latin America in 1952 occurred in nearly every major line of manufacturing, with only food products and fabricated metals moderately higher.

In Latin America, there was a sharp change from a reduction in investments of $60 million in 1950–51, to an increase of $170 million in 1952. Some of the increase resulted from higher undistributed earnings of tanker subsidiaries, and did not go into fixed investment within the area. A significant development in 1952 was a resumption of investment activity in Venezuela in many phases of the industry, including exploration, pipeline construction, and refinery expansion.

Value of United States direct private investments abroad, capital movements and undistributed subsidiary earnings, by selected countries, 1949–52

[Millions of dollars; reduction of investment (−)]

Country	Value end of 1949	Changes 1950			Value end of 1950	Changes 1951			Value end of 1951	Changes 1952			Value end of 1952
		Net capital outflows	Undistributed subsidiary earnings	Other changes		Net capital outflows	Undistributed subsidiary earnings	Other changes		Net capital outflows	Undistributed subsidiary earnings	Other changes	
Latin American Republics, total	4,590	40	109	−4	4,735	165	249	27	5,176	277	303	2	5,758
Argentina	329	15	12		356	−9	18		365	8	18	2	393
Brazil	588	20	36		644	92	67		803	125	85		1,015
Chile	518	22	(1)		540	40	3		583	37	3		623
Colombia	194	−7	6		193	11	3		207	20	7		234
Costa Rica	57	2	1		60	(1)	1		61	(1)	(1)		61
Cuba	619	7	16		642	13	15	2	672	5	9		686
Dominican Republic	102	1	3		106	11	6		123	−7	7		123
Ecuador	16	2	(1)	−4	14	(1)	(1)		14	(1)	(1)		14
Guatemala	104	1	1		106	−1	1		106	1	1		108
Honduras	60	1	1		62	14	2		78	2	3		81
Mexico	374	25	15		414	24	33		471	−10	29		490
Panama	337	−1	12		348	−38	70	−7	373	−48	58		383
Peru	148	−9	6		145	17	3	33	197	28	6		230
Uruguay	51	3	2		56	6	5		67	1	3		71
Venezuela	1,036	−39	−4		993	−16	19		996	115	73		1,184
Other countries	57	−3	2		56	2	3		61	(1)	3		64

In the 1950–52 period, as in earlier periods of American direct investment abroad, the proportion invested in Western Hemisphere countries was maintained at about two-thirds of the total. In 1951 and 1952 about $2 billion was added to direct investments in these countries out of total additions of a little over $3 billion. By the end of 1950 the value of investments in this area alone exceeded the value of all direct investments abroad in 1943.

APPENDIX C

MESSAGE OF LUIS MUÑOZ-MARÍN, GOVERNOR OF PUERTO RICO, TO THE SEVENTEENTH LEGISLATURE AT ITS SECOND REGULAR SESSION, FEBRUARY 23, 1950

MEMBERS OF THE LEGISLATURE:

In my message of last year I spoke to you of the sense of proportion and scale of priorities which should be kept in mind when considering the great and difficult task in which the people and the government are engaged. We have all made a great effort to act according to those norms in the year which has just come to an end. It is such a decisive matter for Puerto Rico that we act each day with greater precision on the basis of this understanding, that I believe it worth while to examine the subject more closely at this time.

The economic goal of Puerto Rico is to increase production as effectively as possible so that the greater number of Puerto Ricans that there are each year will have fewer days of unemployment, a higher standard of living, and depend less and less each day on aid and privileges which are not the result of their own productive activities. It goes without saying that this economic objective is not only desirable in itself but is also a basis and means for a more tangible justice among men and a broader possibility for the enjoyment of cultural and spiritual values. However just is the justice accomplished with insufficient means, it still falls desperately short in its practical results. The human spirit, besieged by the claims of material existence, is not as free as it should be.

The aim of production must also be to bring about a balance between importation and exportation. During the war Puerto Rico accumulated a favorable liquid balance of 260 million dollars because its exports to the continental United States exceeded in this amount its imports from the continent, which were greatly reduced due to wartime restrictions. When the war ended, and normal shipping conditions were reestablished, and emergency restrictions eliminated, Puerto Rico began to import more than it exported. Nevertheless, many millions of dollars come into Puerto Rico in other forms than that resulting from export trade, such as for example, the payments to veterans, the expenditures of the Army and Navy and civil federal agencies, federal aid for highways, public health, and vocational education. These forms of income compensate in great measure for the lack of balance in trade, but do not eliminate it. In 1948, for example, imports amounted to 170 million dollars more than exports, but since 128 million dollars came into the Island from the noncommercial sources above mentioned, the unfavorable trade balance that year was only 42 million. After subtracting the 42 million dollars, a favorable accumulated balance of 191 million dollars remained. For 1949 it is calculated that the discrepancy amounted to 22 million dollars, leaving an accumulated balance of 169 million. Nevertheless, this debt of the economy of the United States to the economy of Puerto Rico is gradually being reduced, and if the unfavorable balance of trade is not corrected within a certain number of years, the debt will disappear completely and a real unfavorable balance will accumulate against Puerto Rico. This situation may be aggravated by the fact that the expenditures of the Army and Navy are being reduced, and that the rights to various types of payments to veterans are being exhausted. An increase in production is necessary to counteract this situation as well as to reduce unemployment, and to continue raising the standard of living and to support the many thousands of new inhabitants in Puerto Rico every year. It is necessary, furthermore, in order to make Puerto Rico less and less in need of federal aid and federal expenditures which do not depend on our efforts or our will. It is to achieve all these objectives that we must continue up the steep road along which we have begun to climb.

The struggle to achieve this economic objective we have called the Battle of Production. This is a battle which is being fought not only by a government responsible to the people, but by the people themselves of all economic classes, who are those who gave the government the order to fight.

To fight this battle and win it, it is not enough to have the will to win which the people of Puerto Rico have so patently developed, and which has given so much sympathy and prestige to their efforts in the eyes of those on the outside who observe and aid us. Nor does the forward march of technical development suffice, nor the skills of the workers, nor the "know-how" in all branches of production and marketing; even if we had all these things, and we do have some of them and are acquiring others, still one thing would be lacking. This is the stern and unflinching willingness to sustain a clear concept of priorities in regard to all the things we want to do and which have to be done to improve the living conditions

of the people. A great deal of clear thinking is necessary if we are to make a conscientious choice among a thousand important things, which cannot be done at the same time, either with the funds at our disposal during one year or over a period of years, and to decide which of these important things ought to occupy first place on the priority list, and which of these important things must unhappily be left in the thousandth place.

We have striven toward this goal, but we must strive harder with every passing day.

Naturally, in a country with abundant natural resources, with a population which is sufficient, but not extreme in proportion to its resources, where it is necessary merely to maintain a situation which has already been achieved, the force with which this concept of priority must be applied may be much less than it has to be in a community like Puerto Rico, where the natural resources are scarce, where the density of the population constitutes a problem, and where a great many matters must be attended to before we reach, after a stiff uphill climb, the plateau on which we may devote ourselves to the mere maintenance of a favorable situation already achieved.

The basic dilemma of priorities is that it involves choosing between great services which the people greatly need, and the great productive effort which the people greatly need, in order to develop and maintain those same services, and all the other aspects of a better life. Out of increased production come the means for giving better service to the people, while only a few services may result indirectly in an aid to greater production, and others, worthwhile in themselves from a humanitarian standpoint, result in no aid whatever to production.

Our tendency, as men who have been deeply identified with the great suffering stoically borne by the masses of our people, is to extend to them the services they need and which they so nobly deserve until we have spent the last cent available for such services. But if we allow ourselves to be carried away on the tide of this very human and decent tendency, we shall never be able truly and permanently to save our people from those same sufferings that so deeply move the heart, and will run the risk that our sentiments will tell us to employ all of our means on temporary relief, only to find ourselves powerless later on to effect a complete and permanent cure. The poverty stricken farmer must exercise great will power not to assuage the hunger of his children with the grain he has with which to sow his fields. If he does not exercise his will power, greater still and more irreparable will be his hunger later on, but if he does exercise it, the crop he reaps will reward his sacrifice.

The fundamental decision which the people of Puerto Rico have to make, and on which will depend multiple minor details, in harmony with that decision is how to divide their present income between the amounts which are to be devoted, on the one hand, to consumption—by private citizens—and to services—by the government—and, on the other hand, the amounts which are going to be devoted to improving and encouraging, and cooperating with, the increase in production.

That is to say, the dilemma lies between investing and spending. The more that is spent, the less there is to invest. The less that is invested, the less there is to spend later on. The more that is invested, the more there is to spend later on. Spending is the easier alternative, and furthermore, the results of spending, though more temporary, are more immediately visible. Therefore we must exercise our will power in order to invest as much as possible and spend as little as possible, since this is the way to put an end to the present situation, to enable our people to free themselves from want as quickly as possible, and achieve a modest degree of prosperity and security.

In pointing out the priority which investing should have over spending, I refer not only to the fundamental policies of the government, but also to policies which ought to take root in the whole community of Puerto Rico. At the most humble level, some grain for the furrow, not all for the loaf. On a higher level, fewer useless luxuries, more concentration of capital in the furrow of dynamic production. Naturally it is true that at the lowest level there is sometimes not a single grain for the furrow which is not needed for the minimum diet, while on the higher levels there is a considerable amount spent on all kinds of luxury items, which might be converted into productive investment.

The work of government, as far as priorities are concerned, is divided in three parts: first, the creation of production, or direct inducements to production; second, services which contribute indirectly but basically to production, and third, services of unquestionable human value which nevertheless do not contribute, except very indirectly, to production. Among those services which, without being production or direct encouragement of production, are nevertheless

necessary to productivity, are education, health, especially preventive medicine, pure water supplies, highways, and industrial, commercial, and agricultural research and experimentation. It is evident that an industrial civilization cannot reach a high point of efficiency and competitive opportunity in a community which bears a heavy burden of illiteracy, deficient general and technical education, and bad health. Such services are therefore desirable, not only for the human values implicit in them, but also because they form an essential part of the economic development toward which we are struggling in the battle of production. Of course, if one wishes to stretch the interpretation, there will always be arguments to prove that almost any service should have priority because it is connected in some remote way with production. But not to artfully search for such far-fetched interpretations is part of the self-discipline that the situation requires.

This brings us to a great dilemma as to what our taxing policy should be in regard to (1) stimulating private investments in industries and crops necessary for winning the battle of production, and (2) providing those public services which are not only humanly desirable but which form an inseparable part of the productive efficiency of the country. The greatest inducement to private investment in production is a tax rate which in general is low, and for this reason attractive to industries. I realize that this is better than a high rate with total exemption for certain new industries. We are trying to find a way to establish such a system, at the same time honoring all legal obligations contracted with new industries which have been established under the tax exemption law. But it is not easy to find, in the case of Puerto Rico, a system which, in addition to being attractive to investors, will produce sufficient income to enable the government to pay for such public services as education, health, experimentation and research, without which the industrialization resulting from the investments would not be really effective.

We are struggling with this difficult problem, and in examining it closely we see the possibility of a system of taxation which, without special exemptions, would fall lightly on those who increase production, and which would give us the funds necessary for the services inherent to production by imposing heavier tax burdens on those activities which are not closely allied to boosting production. The Treasurer of Puerto Rico has made some recommendations in this respect, but we are still not in possession of sufficient knowledge of the problem to attack it at its roots.

I know that the people of Puerto Rico have made up their minds to free themselves from extreme poverty and insecurity. I know also that they are willing to make the sacrifice that this implies. I know that we are willing to tighten our belts during these first years of our economic development, if we can see clearly that this is leading us, slowly but surely, to overcome once and for all over the difficult situation of our people. I also wish to point out that if the spirit of sacrifice is to be found in all, even in those for whom their poverty makes it more burdensome, the example must be set by those, who because of their superior economic position, find the sacrifice less difficult. I am also fully aware of the responsibility which this places on our shoulders—yours, legislators, and mine. It is up to us to see that this sacrifice is not in vain. Every dollar invested, instead of spent, represents a renunciation of human needs for pursuit of a hope. It is for us to defend that hope so that its fulfillment will not come to naught.

At this point I must inform you that although the economy of Puerto Rico is saving and investing between 35 and 50 million dollars a year, this investment is much less than we need. Our studies reveal that no less than 80 million, probably 100 million, is what the Puerto Rican economy, private as well as public, ought to save and invest each year if our expansion is to carry us to the goal within a period of time that is not too long for even the most robust stoicism and the most vigorous hope. Our economy must eliminate that difference on the basis of greater investments, and we should count not only on those which may come in from outside, but also on those which are the fruits of a sober understanding of the situation, of an attitude of the people based on that understanding, and of legislation which gives courageous recognition to these realities and takes the necessary steps to deal with them.

The Government of Puerto Rico has contracted an obligation with the people who have entrusted it with the struggle to solve their difficult problem of existence. This implies that we carefully examine the balance between what *it is necessary to invest* and what *must be spent*, in the light of our fundamental obligation to increase the productivity of Puerto Rico. This obligation which the government has in regard to expenditures of public funds, should similarly be a matter of conscience and foresightedness for private citizens in making expenditures on their own initiative.

In striking a just balance between what the government should invest in increasing production, directly or indirectly, and what it should spend on giving services which do not in themselves increase production, let us carry forward each day in greater harmony our established practice whereby both the Executive and Legislative branches are at the same time motor and brakes, rather than dividing the functions so that one branch will be the motor and the other the brakes. In other words, I should not be the one to propose an attractive but secondary baseball park, and you the ones who have to remind me that the productivity effort comes first. Nor should the roles be reversed; rather should we both feel the responsibility of creative risk and conscientious sacrifice, although we may come to different conclusions. Both you and I, all of us, must realize what it means to think in terms of a government of the poor and for the poor.

A government of the poor and for the poor is not a government which invests little or spends little on legitimate services. That might be perhaps a government of the rich for the rich, who, because they were rich, would be unwilling to contribute of what they had, and would not need to have others contribute to what they had. A government of the poor for the poor is a government which should use all its economic powers, without haggling, but within a strict and careful system of priorities, to raise the country's level of production as rapidly as possible to the point at which extreme poverty and insecurity will disappear from the life of man.

The idea which I wish to drive home to you and to the people of Puerto Rico is that of emphasis, of point of view, of what must be attended to first, of priorities of action. Each one must collaborate, thinking independently, to make clearer in the minds of all what the true priorities are in each case, in consonance with the common goal. What I ask of you is that we strive together and that together we keep vigil so that in deciding on each expenditure or public investment, and on the encouragement to be given to private investment, we conscientiously apply the criterion of what will help most to end—to end once and for all, and not just mitigate in part—the extreme poverty of our people.

Fellow citizens of the Legislature: my most heartfelt recognition for the noble collaboration I have received from you during our first year of government, both in the attention with which you have received my recommendations, and in the criticisms and improvements of them by means of which you have so effectively contributed to the good work of our government.

Respectfully submitted.

LUIS MUÑOZ-MARÍN, *Governor.*

LA FORTALEZA, *February 23, 1950.*

APPENDIX D

THE INSTITUTO BRASIL-ESTADOS UNIDOS

(By Dr. Jose Salles de Oliviera Coutinho)

In 1937 a group of outstanding members of Brazilian intellectual and social circles together with highly representative individuals of the American colony resident here, proposed the idea of establishing in Rio de Janeiro an institution having as its object the development of a closer understanding between Brazil and the United States. It was easy to justify the necessity for the existence of such an institution among us. In the first place it would represent the embodiment, as it were, of that spontaneous and necessary friendship which always existed between the two countries. It would, on the other hand, reaffirm in spirit an identity of ideals which began with the formulation of the Monroe Doctrine, the guaranty of the maintenance of our independence and passing on through our organization into a Republic where American political thought left its indelible mark; it went on to the First World War, when for the first time in the crucible of history, we found ourselves on the same side of the battlefield. In 1937, however, when the idea of the foundations of the Instituto Brasil-Estados Unidos was launched and realized, dangerous adverse winds were sweeping throughout the world, threatening to destroy Pan American unity and afterward to destroy completely the liberty of all of us. This was, perhaps, the principal motive which made our elite understand and support with enthusiasm the establishment of an association which worked to aid in maintaining this Pan American unity, dependent above all upon the union and friendship of the two great nations of the Western Hemisphere. It is a thing of pride to us that we have been a part of that

irrepressible movement of opinion in favor of democracy which finally placed the two countries together in the glorious battles of Second World War.

But the founders of the Instituto Brasil-Estados Unidos were still interested in working for the diffusion of American culture in this country. In this field also the Brazilian elite offered prompt assistance since they soon realized how useful for Brazil would be an understanding of the cultural experience of the United States, a nation which, young like our own, is rising to create new and splendid forms of civilization.

Today, after the passage of so many years, we are pleased to point out that we contributed in more than one way to solidify the ties which bind us to the great American democracy. We are convinced that if the seed sown in 1937 grew so well, it was because it met with support in public opinion which never failed to see in the IBEU a Brazilian institution whose work of interchange with the United States did not neglect the interest of Brazil.

We shall endeavor to give in a brief fashion in this essay an idea of what our institution is like today. It is our intention to pay homage to these who have preceeded us and also to encourage those who may come after use.

AMERICAN AID

We recognize with pleasure that our development was only made possible because of the never failing and very valuable assistance from the United States, whose interest in the interchange between the two countries is obviously parallel to ours.

We do not count as a part of this American aid the magnificent collaboration which we have received from the citizens of the United States residing here, because they look upon the institute more as members of the national community than as foreign citizens. We refer above all to the perfect cooperation which we have always received from the representatives of the United States in Brazil in general and from the public affairs officer in particular. Among the Ambassadors who have served here and their assistants, during the period of their stay, the institute recruited some of its greatest friends and best collaborators.

We have always received directly from the Department of State inestimable aid, for the Department has sent out the executive secretary, the director of courses, and a certain number of English teachers, all brilliant and capable officials. From the same source we received every year books for our library and phonograph records for our collection, as well as, during some years in the past, travel stipends for our scholarship students.

Meanwhile, more than material assistance, the certainty of being able to rely upon the complete understanding and wholehearted sympathy of those responsible for the direction of the foreign policy of the United States has always been a source of great encouragement for us.

THE ORGANIZATION OF THE INSTITUTE

The IBEU is directed by a body of 10 directors, Brazilians and Americans, 1 of whom is the president of the institute. This board of directors is elected for a period of 2 years by an administrative council, which in its turn is chosen by the general assembly of members which at present numbers 1,066.

Each one of the directors, assisted by a committee of advisory character, is responsible for one of the activity divisions of the institute as described below.

The direction of the administrative life of the institute is incumbent upon the executive secretary and that of the department of courses upon the respective director subordinate to the same executive secretary.

Financially the institute is self-sufficient, its annual income being at present about Cr$3,500,000 ($187,000).

The centers of the IBEU are today located in 3 headquarters; 1 headquarters on Rua Senador Vergueiro 103, and 2 branches, 1 downtown on Rua México 90 and the other in Copacabana, Rua Sá Ferreira 24.

DEPARTMENT OF COURSES

We have in our course almost 3,000 Brazilian students studying the English language and a reasonable number of Americans resident in Rio de Janeiro learning the Portuguese language.

For various reasons we give great importance to our department of courses. From it comes the great volume of our financial receipts (83.6 percent as against scarcely 8.9 percent brought in by the annual dues of the members). There we

give to thousands of Brazilians a mastery of the English language which serves as a key as much for their cultural development and their progress in practical life. But still, by means of a whole series of extracurricular activities, we try to give them a sample of one of the most attractive aspects of American life, namely, university organization.

SCHOLARSHIPS

Through the medium of the International Institute of Education of New York, the Instituto Brasil-Estados Unidos has sent, in the 16 years of its existence, 296 young Brazilians to a large number of American universities situated in the most diverse parts of the country. The vast majority of these young people, holders of scholarships and fellowships, representatives of the most important professional activities, attended universities in the classification of graduate students thus perfecting knowledge already brought from Brazil.

By means of a rigorous process of selection, the scholarship committee of the IBEU sees to it that its holders of scholarships are always young people of the highest moral and intellectual qualities and such as to be always considered as among the best foreign students in the United States. On the other hand, it is a motive of pride for the scholarship committee to witness the enormous influence, entirely out of proportion with their numbers, which its ex-scholarship holders have succeeded in exercising in the most diverse fields of national life. But, we are pleased to note that all of them have become active and decided champions of Brazilian-American understanding.

PUBLICITY AND INTERCHANGE

The committee of publicity and interchange has in its charge a most important part of the plan of activites of the institute. Promoting lectures and course by outstanding Brazilians and Americans, studying affairs of interest of the life of one or the other country or of the relations among the two, this sector of the activity of the IBEU continually attracts to our headquarters some of the most influential and representative elements of Brazilian intellectual life. The promotion of visits to Brazil on the part of traveling American professors has been of particular value. Their courses have represented an important contribution to the cultural and scientific progress of this country and on the other hand have been an impulse toward better understanding and friendship with the United States.

LIBRARY

We have at the present time about 9,000 volumes in our libraries; 7,500 being in the central headquarters and 1,500 in the downtown branch. To the 22,000 readers who annually make use of the two libraries we offer a permanent exhibit of American Culture in its literary, artistic, and scientific aspects.

As a comment to the services of the library, we place at the disposal of the members our collection of phonograph records and our collection of slides and film strips for educational purposes.

ART

The auditorium of the central headquarters is transformed periodically into an art gallery for the exhibition to the public of the productions of Brazilian and American painters. Every year we have six or more of these exhibits and we are pleased to remark that some young artists, today of recognized worth, had the opportunity for their first contact with the public in the Institute.

SOCIAL ACTIVITIES

Under the supervision of the social committee, there have taken place from time to time in the institute, meetings, receptions, luncheons, and other activities of a similar nature destined to stimulate the good feeling between Brazilians and Americans or to pay homage to outstanding individuals of one or the other country.

LOOKING TOWARD THE FUTURE

Sixteen years of our existence having passed, it seems to us that we are in a situation to judge the general trends of orientation established by our predecessors and followed by the present board of directors. Looking toward the future, it seems to us that we can desire nothing more than we may be able to increase our

present activities. However, let us cite in a private manner some of the objectives which we should like to see achieved.—

I. The expansion of the department of courses, the basis of our financial life.
II. The reactivation of the scholarship program, now at the lowest point in its history.
III. The intensification of the lecture program for visiting American professors.
IV. The construction of our own headquarters which seems to us the best assurance for the permanence of our institute.

If we could foresee an adequate solution for the problems connected with each one of the above points, we could look upon the future of this institute with renewed confidence in this hour so full of responsibilities in which our common liberty is more than ever in danger.

Appendix E

[Translation]

Study of Chilean Copper Production

The policy applied to the large copper-mining industry on taxation, exchange rate, and prices has created a difficult situation for the industry and the country, which situation we opportunely and reiteratedly forewarned and the causes of which it is now advantageous to analyze in the light of available data.

WORLD COPPER PRODUCTION

In the first place, it is necessary to point out the progressive decline in importance of Chilean copper production in relation to total world production. In 1944 Chilean production amounted to 549,417 short tons, or 19.68 percent of the total world production of 2,791,720 short tons, while in 1951 Chilean production amounted to only 418,572 short tons, or 14.44 percent of the world production of that year, which was 2,898,839 short tons. (Source: American Bureau of Metal Statistics, p. 7, issue of June 1952.)

It must not be forgotten that the production of the three large companies which operate in Chile is limited by various natural factors. The production of El Teniente (Braden Copper Co.) has increased by more than 10 percent over its production of last year, but future increase in production is limited by topographical factors and by water supply. Nor is the Anaconda group (Chile Exploration Co. and Andes Copper Mining Co.) in a position to produce much more than during recent years, since the higher production of its new plant at Chuquicamata will meet with hindrances arising out of its mixed ores (oxides and sulfides), and because the Potrerillos mine is becoming exhausted.

Under these conditions, the percentage that Chile reaches in world production will continue to diminish in the future, owing to the easily understandable reasons given below. The high price of copper, the desire of all countries to have adequate sources of supply of the metal, the huge investments made by copper-producing companies in other countries because of high profits in recent years, are factors which have made it possible to adopt everywhere a policy of increase in copper production the results and consequences of which we are already beginning to feel.

In the United States alone copper production should increase by more than 260,000 short tons per year in the next 3 years, in spite of the fact that production of some mines currently in operation is decreasing. (Sources: Wall Street Journal, issue of February 18, 1952, and Daily Metal Reporter of October 8, 1952).

We may point out the following list of some projects currently being carried out, with the investments that are being made and the annual production of some of said projects:

	Investment	Increase in tons
1. American Smelting & Refining, Silver Bell, Ariz	US$17,000,000	18,000
2. Anaconda Copper Mining Co., Yerington, Nev	38,000,000	33,000
3. Anaconda Copper Mining Co., Greater Butte, Mont	27,000,000	45,000
4. Bagdad Copper Co., Arizona	14,000,000	13,500
5. Calumet & Hecla Consolidated Copper Co., Osceola, Mich	6,000,000	7,000
6. Consolidated Copper Mines Co., Morris Brook, Nev	(1)	8,000
7. Copper Range Co., White Pine, Mich	57,000,000	35,000
8. Kennecott Copper Corp., Deep Ruth, Nev	14,000,000	18,000
9. Magma Copper Co., San Manuel, Ariz	95,000,000	70,000
10. Miami Copper Co., Copper Cities, Ariz	15,000,000	22,500
11. Phelps Dodge Corp., East Bisbee, Ariz	25,000,000	38,000
Total new production		308,000

[1] No data.

Sources: The Wall Street Journal of Feb. 18, 1952; Daily Metal Reporter of July 15, 1952; Daily Metal Reporter of July 22, 1952; Daily Metal Reporter of Oct. 18, 1952; Engineering & Mining Journal of September 1952.

These huge investments are being made in the United States because the Government of that country authorizes the companies to effect extraordinary writeoffs covering the new capital investment in a period of up to 5 years and, in addition, because it grants them loans under very favorable conditions. Finally, when it is necessary, it assures them a stable floor price for a period of years or for a certain volume of production.

However, this sizable increase in production is not restricted to the United States alone. In fact the high price imposed on the market by Chilean copper for some time now has made it possible for all companies that produce copper outside of Chile to make extraordinary profits and strengthen their financial position. Some of them, such as the O'okiep Co., of Namaqualand, Africa, have attained gross profits of 23.06 cents United States currency per pound. These enormous profits have facilitated extension of the facilities of many companies in the rest of the world as well as the creation by them of subsidiary enterprises to prospect for and develop new deposits.

In Northern Rhodesia, where the legislation allows all investments of capital made during the first 5 years to be charged against the profits of that period and that any balance or subsequent investment be fully charged against available profits, huge investments are being made (World Mining, February 1953). The Mufulira Copper Mines, Ltd., is investing £3,000,000 in a new refinery, now in operation, and its production, which is increasing, already amounts to 85,000 tons per year. Roan Antelope Copper Mines is already producing 90,000 long tons per year. (Source: Daily Metal Reporter, November 13, 1952; World Mining, May 1953.) With capital of these same companies there have been organized four new companies, all located in the copper belt of Rhodesia, one of the richest copper regions in the world: Chisangwa Mines, Ltd., Kadola Mines, Ltd., Luapula Mines, Ltd., and Mwinilunga Mines, Ltd. Two new companies will soon start production: Chibuluma, subsidiary of Mufulira Copper Mines, which will produce 18,000 tons of copper per year, and Bancroft, subsidiary of Rhokana Corp., Ltd., which will produce approximately 50,000 tons of copper per year. Furthermore, the Rhokana Corp. is organizing a new company to develop the three large deposits of Konkola, North Kirila, and South Kirila, with a production capacity of 48,000 tons of copper per year (World Mining, February 1953); and the Anglo-American Corp. of South Africa is developing the Kansashi Mine (World Mining, April 15, 1953).

The N'Changa Consolidated Copper Mines, Ltd., also of Rhodesia, owner of one of the largest copper deposits in the world, whose ore has a grade of over 3 percent, which commenced production in 1939 with 1,473 tons and in 1951 attained 77,361 tons, has under way an expansion program which will make it possible to produce in a short time 130,000 tons per year. (Source: Engineering & Mining Journal of August 1952, p. 93.)

These companies will also benefit from the low taxation which prevails in Northern Rhodesia, which is currently only 37½ percent of profits. In order to take advantage of this low taxation, five of the large companies which operate copper mines in that country have recently changed their legal domicile from London to Northern Rhodesia (Daily Metal Reporter of March 10, 1953).

Apart from these private investments, there are being carried out at the same time in Rhodesia huge governmental projects to develop the mining industry. In that region mining production met the twofold problem of transportation and electric power. To solve the first one, the Northern Rhodesian Government obtained a loan of US$14 million, which will be used to improve railroad facilities and construct a new railroad to the Indian Ocean. Relative to the second problem, there has started construction of hydroelectric plants on the Kariba River, with an initial cost of £43,500,000, and on the Kafue River with a cost of £27,600,000 (World Mining, May 1953; Optima, June 1953).

In Mauretania, in French West Africa, a French company is developing the new Akhout deposit which will produce 20,000 tons per year (Engineering & Mining Journal of January 1, 1953).

In the Belgian Congo the Unión Miniere du Haut Katanga, whose production has increased from 175,920 tons in 1950 to 205,000 metric tons in 1952, continues an intense expansion program, especially developing its hydroelectric potential with the new Delcommune and Lualaba plants which will make it possible to increase its production a great deal more (Daily Metal Reporter of February 21, 1953; Mining World of April 15, 1953).

New investments are also being made in other parts of Africa. The Ookiep Copper Co. is investing £5,000,000 in Namaqualand (Daily Metal Reporter of September 12, 1952). It should be borne in mind that the African ores in general have a grade of copper content which greatly exceeds that of the Chilean deposits, which makes the cost of production lower.

In Canada the Campbell Chibougamou mine will commence to produce 18,000 tons of copper per year; the Sherritt Gordon Mines, Ltd., will begin production in its Lynn Lake, Manitoba, mine; and a large new deposit of copper has just been discovered in British Columbia, which will be exploited by Frobisher, Ltd., and Granby Consolidated Mining Co.

The same is happening in the rest of the world. In Australia the Mount Isa Mines has recently invested £1,000,000 more in its copper plant and has commenced to ship copper to the United States; and the Government of New South Wales has invited North American Companies to develop its copper ore bodies. Turkey is developing her Murgull mine which will produce 12,000 tons per year, and investments are being made in Canada, Alaska, Cyprus, Israel, and many other places for the same purpose.

The case of Peru is especially significant. The new mining code, enacted in 1950 for the purpose of developing the natural resources of that country, abolished the export tax and replaced it with a tax on profits; established among other benefits exemption from taxation for new mining companies, with exception of taxes on real estate and income; limited the income tax on the entire mining industry to a maximum of only 20 percent, which in some cases is subject to an additional surtax of 12 percent; also established the right to make deductions for mine depletion in computing taxable income; and freed mining machinery from import duties. This has resulted in an enormous increase in mining activity. The Cerro de Pasco Corp. is developing the Cuajones copper mine, and will soon start production in its new San Cristobal mine; the American Smelting & Refining Co. has decided to invest $175 million in the Toquepala mine, which will produce more than 100,000 tons of electrolytic copper per year in a few years, and is, in addition, developing the Quellaveco mine (Engineering & Mining Journal of March 12, 1953). A subsidiary of the Canadian firm, Ventures, Ltd., is developing the Aguas Verdes copper mine (Mining World, May 1953).

Based on present data, the net increase in world copper production for 1955, including the United States, will be, according to calculations of United States experts, 550,000 tons per year. (World Mining of April 15, 1953.) In connection with this figure it should be pointed out that the consumption of copper in the world increased in the last 14 years from 2,231,134 tons in 1937 to 2,828,781 tons in 1951, that is, a total of 597,647 tons, which is an average annual increase of only 42,689 tons. (American Bureau of Metal Statistics, edition of June 1952.) (Statistics of countries in the Soviet orbit are not included in these figures.)

In view of these world prospects, the future of Chilean copper is not clear. Its relative importance vis-a-vis total production is constantly decreasing, and the extremely serious disadvantages of the policy which is being applied to the large industry will constitute an additional deadweight in its struggle in world markets.

All the aforegoing is in regard to increase in direct production, but we must not fail to consider other factors which will have effect on the future of copper. We refer to the increase in production and consumption of aluminum and plastic materials which are in many cases replacing the use of copper.

In 1950 the aluminum production of the United States was 750,000 tons per year, which will be increased to 1,700,000 tons in 1955, without counting 200,000 tons more which it is planned to produce in Alaska. The price of aluminum which is currently 20½ cents per pound, was 20 cents in 1939. During the same period the price of copper has increased 167.8 percent. Finally, development of the technique of manufacturing aluminum is making it possible for it to replace copper in many industrial uses.

This replacement is especially serious in the electrical industry. For this purpose it is sufficient to consider that, taking into account all conditions of weight, conductivity and radiation of heat, and based on a cost of 19.5 cents per pound of aluminum and 28.5 cents per pound of copper, 28.5 cents worth of aluminum will fill the same electrical function as $1 worth of copper, on the basis of equal increase in temperature (Westinghouse Engineer, May 1953).

CURRENT SITUATION OF THE COPPER MARKET

It cannot be denied that the high prices of our copper have caused serious disruptions in the markets.

As a result of the Washington agreements, between the Governments of Chile and the United States, at the beginning of 1951 the 20 percent quota, which was called "of free disposal," was negotiated in Europe at exceptional prices which reached US $1,200 per ton. This system of sales forced the companies to abandon the normal market that they had in Europe for their production. The European market for the "free disposal" copper was lost when purchasers refused to pay the fixed price of US $1,200 per ton. Subsequently, when sales had been handed over to the Central Bank of Chile and the price fixed at 35½ cents per pound of copper placed f. o. b. Chilean port, this quotation also turned out to be very high for European purchasers who were able to buy the copper they needed from other sources at lower prices.

This situation has been maintained to date, and thus the copper of El Teniente mine, which was normally sold in Europe, lost that market and 98 percent is currently sold in the United States market.

At present Great Britain is supplied exclusively from her Dominions; France has sought other sources of supply; and, finally, Western Germany has managed to supply herself almost entirely by refining secondary (scrap) copper. In 1951, for a consumption of 264,818 tons, Western Germany produced 234,647 tons. (Source: American Bureau of Metal Statistics, June 1952.)

All the foregoing appears to indicate that, in current circumstances, we have lost the European market for sales of Chilean copper until we are in a position to compete in price.

However, the shrinking of the European market and increase in production in other parts of the world has also had repercussions in the United States market.

In the first semester of the present year the British Ministry of Materials authorized Rhodesian producers to sell copper in the United States, where they made sealed sales of blister copper for a total of 100,000 tons, it being estimated that they will be able to deliver up to 10,000 tons per month in the future (New York Times, Mar. 11, 1953). On its part, the Union Miniere du Haut Katanga definitively entered the American market, for which purpose it commenced shipments in April of the current year (Daily Metal Reporter, Mar. 19, 1953). Furthermore, Canada has increased in the present year the monthly average of its copper deliveries to the United States from 6,764 to 9,747 tons; Mexico and Turkey have increased their deliveries by approximately 1,000 tons per month each, and Australia has commenced to ship copper to the United States periodically (American Bureau of Metal Statistics, July 1953).

In the United States, where the domestic price was a little more than 30 cents per pound, Chilean copper could be sold, until a few months ago, at the price of 36½ cents per pound set by the Central Bank, because the large producing companies in Chile, which also produce in the United States, obtained that buyers take, jointly with their orders for American copper, a percentage of Chilean copper at a ratio of 60 to 40 percent. The buyers accepted this system because the average price of copper which they purchased was not much higher than the price of the metal in other countries outside the United States.

When part of the African production which was formerly consumed in Europe was diverted to the United States market, and when those producers committed themselves to supply normally their American customers, the situation basically changed.

In the first place, the price of copper dropped considerably. American producers equalized their prices at a level of 30 cents per pound, and African produ-

cers offered copper at even lower prices, approximately 29¾ cents per pound. This caused the average price at which copper was being offered by the producing companies in Chile, which we have explained, to cease to be acceptable to consumers (El Mercurio, April 15, 1953, AP dispatch; Journal of Commerce of April 13, 1952).

Furthermore, when foreign copper, other than Chilean, was offered in appreciable quantities in the United States, a large part of the orders for Chilean copper that consumers had been placing because of imperative and immediate supply requirements, was also lost.

Thus we reached the beginning of May when consumers purchased Chilean copper only after they had bought all the copper available from other sources, and were disposed to pay the price fixed by Chile only for the small balances which they had not been able to obtain. The consequence of this was that Chile could not sell all of her production and commenced to accumulate stocks of unsold copper. Neither the Paipote Smelter nor the companies of the medium mining industry have been able to sell their production since April of the current year owing to the high price demanded.

It is convenient to emphasize also other recent occurrences in the copper market. The Daily Metal Reporter of last June announced that the International Nickel Co. has signed a contract with the United States Defense Materials Procurement Agency for delivery of 50,000 tons of electrolytic copper, starting next December, at a price of 27 cents Canadian currency per pound. This contract runs until the year 1958. Likewise, the Falconbridge Nickel Mines of Toronto has signed a similar contract for a period of 10 years which contemplates scaled deliveries of 26,000 tons of copper at an average price of 27 cents per pound (World Mining, May 1953).

If we consider that in the first semester of 1953 the United States consumed a record of 803,000 tons of copper, that between May and June her stocks of refined copper increased by almost 10,000 tons, that African copper has been delivered only since May and that, nevertheless, the United States could leave off purchasing 60,000 tons of Chilean copper, it is obvious that there exists a real danger that we stand to lose definitively the American market for a large part of our copper production (Copper Institute, Copper Statistics, July 16, 1953).

To these prospects we must add that according to all technical authorities the North American industrial production will decrease in the second semester of 1953 in an appreciable way, and deliveries of African copper and from other sources will reach the United States steadily and periodically.

The result, then, is that the loss of the American market, the only one which at present can absorb the total of our production and pay for it in dollars, which are vitally necessary to the country, should seriously concern us.

CURRENT SITUATION OF THE COPPER INDUSTRY

What is the situation of the large copper industry in Chile before this panorama?

In the first place, copper sold at an exceptionally high price, which by its impact on the market has made it possible for the foreign industry to make huge profits and new investments throughout the world. In our country, the price differential of more than 11 cents United States currency per pound has accrued in its entirety to the Chilean Treasury, without any share of this differential for the companies which would have made it possible for them to set aside additional capital or create funds for fresh investments. At present the high price of our copper has practically paralyzed sales of Chilean copper.

In the second place, tax legislation which takes 100 percent of the selling price of copper over a base price of 24½ cents United States currency per pound; which burdens with a rate of 60 percent the profits of the companies under said price; which grants no incentives to fresh investments of capital; and which by its instability is a constant threat to the future of the industry.

In the third place, a regime of discriminatory exchange rates which weighs very seriously upon the costs of the industry and which may cause a serious disturbance in Chilean production in any crisis in the world market. In fact, the companies obtain the exchange rate of only 19.37 pesos per dollar for almost all their costs of production in Chile and, consequently, said costs in Chilean currency are raised considerably above their real value. This treatment is a real indirect and entirely discriminatory tax on our copper industry, wherefrom it results that the cost of the Chilean enterprises is higher than the majority of the large copper-producing companies in the rest of the world. For Braden Copper Co., which must exchange

almost $37 million per year at the exchange rate of 19.37 pesos, this item represents higher cost of production and a tax on said cost of almost $30 million per year.

Finally, an atmosphere among the public, and even in some governmental agencies and certain political sectors, of open hostility toward the industry, which atmosphere is based on absolute ignorance of the contribution which the large copper-mining industry makes to the national economy.

If we examine the case of Braden Copper Co., which returns to Chile more than 90 percent of the foreign selling price of the copper it produces, which in recent conditions of production and price reached $130 million; which within that high return pays to the Chilean Treasury through direct and indirect taxes more than $97 million per year; whose workmen are paid an average daily wage of nearly 500 pesos per day worked; whose subordinate employees earn an average monthly salary of over 16,000 pesos; which has held for 5 years the safety record for underground operations; which under such unfavorable conditions has nevertheless made substantial fresh investments of capital out of its profits (almost $4½ million in 1952) and increased its production from 139,592 short tons in 1949 to 184,812 short tons in 1952; which cooperated unreservedly in order to obtain a special price for Chilean copper and has resolutely cooperated with the Central Bank to make sales of copper under those price conditions; this atmosphere is totally and absolutely incomprehensible.

A series of erroneous concepts, which it is advantageous to rectify, contribute to form this atmosphere.

One of them is in regard to the companies' system of return of exchange. There exists the belief that the current system deprives the country of foreign exchange which it should legitimately have. Nothing is more inexact. The dollars returned to Chile by the copper-producing companies consists of their costs of production in Chile, importation of materials and supplies required by their operations, and the taxes that they must pay. So, practically, the only amount that the companies retain abroad is the part of the profits due to them. Therefore, no system of exception or privilege exists. Any system that could be established would have to authorize the companies to transfer their profits and, consequently, the amount of foreign exchange available to the country would not increase, unless there should be the concealed purpose of spoliating and depriving the enterprises of their share in the profits due to them. Furthermore, and out of these profits, the companies have made substantial additional remittances for fresh investments of capital. We may point out the huge amounts required to erect the new sulfide plant at Chuquicamata and the important investments which Braden Copper Co. makes from year to year.

Definitive legislation for the copper industry cannot be based on a combination of fundamental errors which ignore reality. The future of the country and the welfare of the coming generations of Chileans rests upon the future of the copper industry.

What was foretold regarding the nitrate industry at one time may now be unfortunately applied to the copper industry: "It is a great misfortune for Chile that copper should always have been and should continue to be a political question."

The problems of the industry are related to sales and to production itself, and they may be solved only on a high and calm level.

In regard to sales and the loss, perhaps definitively, of the European market, the future of the copper industry, basic foundation of the national economy, lies in our being able to recover the North American market for our entire production.

Some people maintain that a market can be found outside of the free world. Those who know world consumption realize that Eastern Europe and Russia cannot absorb the 400,000 tons that Chile produces annually. At the best they can make only occasional purchases of quantities much smaller than this amount. In any case, it is not apparent how the country can subsist without the dollar currency derived from its copper exports.

The solution is to return to the producing companies the freedom to produce economically and to sell the copper that they produce. In the final analysis, the recovery of a market amounts to recovery of individual consumers. Habitual consumers of copper deal with the companies because they also buy the copper that the latter produce in the United States, since there exist between them friendly relations which are the result of many years of dealings during which they have been served properly and equitably. These buyers will purchase

Chilean copper in preference to copper from Africa or other sources under price conditions which are not disadvantageous, only if their customary suppliers request them to do so.

This knowledge of the buyers and the market, which the copper-producing companies possess, can still save Chilean copper.

In regard to production, it is essential to make an early revision of the tax regime of the industry and of the exchange system to which it is subject.

By means of a single income tax, it is necessary that the enormous contribution of the copper industry to national economy be appreciated by everybody and that the companies attain the tax stability which is essential in order to be enabled to plan calmly for the future. By means of a realistic exchange rate, it is necessary that costs find their true levels, in order to be able to compete under favorable conditions in the markets and in order that the industry's purchases in the country may strengthen the rest of national production.

Finally, and along with everything that has been said above, it is fundamentally necessary to seriously illustrate public opinion and supply accurate data in order to create an atmosphere of understanding and cooperation with the copper industry by all national sectors.

We have prepared this study, gathering considerable data which have been published in magazines and periodicals and which may be verified at any time. Its purpose is merely to make known to persons who are interested in the destiny of Chile some of the different phases of the copper problem. These data lead to the conclusion that any resolution taken without due consideration of the true national interests and the stability of the industry can cause a real disaster. This possibility must be avoided by every possible means, and for this reason we earnestly hope that before any decision is adopted there must be duly considered not only the present but also the future of the country and of the copper industry, which has yielded in the past so many benefits, and can continue to contribute to the finances of the country, to social peace, and to the welfare of the entire nation.

SANTIAGO, *July 31, 1953.*